

U.S. Naval Asylum, Biddle Hall
(U.S. Naval Home, Biddle Hall)
Southwest corner Gray's Ferry Avenue and
Twenty-fourth Street
Philadelphia
Philadelphia County
Pennsylvania

HABS No. PA-1622 A

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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Buildings Survey
National Park Service
Department of the Interior
Washington, D.C. 20240

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HISTORIC AMERICAN BUILDINGS SURVEY

UNITED STATES NAVAL ASYLUM, BIDDLE HALL
(United States Naval Home, Biddle Hall)

HABS No. PA-1622-A

Location: Southwest corner of Gray's Ferry Avenue and
Twenty-fourth Street, Philadelphia, Philadelphia
County, Pennsylvania.

Present Owner: General Services Administration; surplus property
since 1976.

Significance: The Biddle Hall is a major Greek Revival
structure of imaginative plan and fireproof
construction attributed to William Strickland,
one of the major 19th century architects. At one
time this structure housed the first formal U.S.
Naval Academy, the Naval Asylum, and the Naval
Hospital of Philadelphia.

PART I. HISTORICAL INFORMATION

A. Physical History:

1. Date of Erection:

Cornerstone laid: April 3, 1827
Construction suspended: 1829-32
Dedicated: December 3, 1833

2. Architect: William Strickland (1788-1854), Supervising architect.

3. Original and subsequent owners:

The following is the property ownership records of the asylum.
The information is from the Records Unit, Philadelphia City Hall,
Philadelphia, Pa.

Grantor

Timothy Abbot and
Ann N., his wife

Grantee

August 29, 1826
The Secretary of the
Navy, the Secretary of
the Treasury & the
Secretary of War of the
United States of America
for the time being the
Commissioners of Navy
Hospitals, for 24 acres.

In 1976 ownership of the facility was transferred to the General Services Administration.

4. Builder, contractor, suppliers:

George Strickland, Clerk of the Works, William's brother
John Struthers, Superintendent of Masons, who worked on the
Philadelphia Exchange (Merchants' Exchange)
Davis Henderson, marble supplier
Samuel Richards, casting work on piazzas
John O'Neill, carpenter
George G. Leiper, granite pier work for piazzas

5. Original plans and construction:

- a. Principal story (based on William Strickland's sketch): A symmetrical plan is used for this story: an octastyle portico having two lateral dormitory wings and a domed rear chapel (56' square), on axis opposite the main entrance, which is entered by a wide flight of exterior stairs. There are "piazza" verandas on the lateral wings (back and front) as well as on two sides and rear of the chapel portion of structure. Two staircases flank the central interior hall which extends from main entrance to chapel area in the rear. A series of four rooms each immediately flank the main entry; lateral passages lead on each side through the dormitory wings to end pavilions (later sitting rooms) and rear privies. Four rooms (two infirmary, one apothecary, and one surgeon) flank the rear chapel.
- b. Basement story (based on later plans): The basement of the dormitory wings is similar to the principal story with kitchen and dining spaces below the chapel. The basement is raised from the ground.
- c. Second story (based on later plans): The second story of the dormitory wings is similar to the principal story. Rooms for the governor and surgeon are in central portions of the second story.

Other original plans included an auditorium.

6. Alterations and additions:

1842 Building divided by a partition of lath and plaster under direction of architect William Strickland. The northern half was devoted to the Asylum and Naval school, and the southern wing to the hospital.

- c. 1843 Cellar added under whole structure.
- March 1, 1844 Central partition dividing building in two parts removed.
- 1848 Attic ceiling altered and windows added. Agnes Gilchrist in her book, William Strickland, Architect and Engineer, 1788-1854, attributes this work to 1870s.

Other alterations have been made after 1848.

B. Historical Context:

- Aug. 29, 1826 24-acre lot containing Pemberton House, "The Plantation," sold by the Abbott family to the U. S. Navy for \$16,000.
- 1826, after purchase William Strickland commissioned to design the asylum building, originally called Marine Hospital.
- Aug. 1838 Naval Asylum detached from Philadelphia Naval Yard as separate command under Commodore James Biddle, its first governor.
- Nov. 1840 First formal U.S. Naval Academy opened in Asylum.
- Sept. 1845 U.S. Naval Academy relocated to new site in Annapolis.
- 1868 Removal of hospital function to newly completed hospital structure (Laning Hall, Building No. 2, HABS No. PA-1622-D).
- July 1, 1889 Name changed to U.S. Naval Home.

PART II. ARCHITECTURAL INFORMATION

A. General Statement:

1. Architectural character: The Biddle Hall is an impressive Greek Revival structure built for comfort and convenience for the retired seamen.
2. Condition of fabric: Before 1976, the overall condition of the Biddle Hall was good. Today, due to its status as a surplus property, the building is in deteriorating condition.

B. Description of Exterior:

1. Overall dimensions: The building measures approximately 385' (thirty-three bay front) x 135'. It is two-and-a-half stories high with a raised basement.
2. Foundations: Coursed granite ashlar.
3. Walls:
 - a. Basement floor: Coursed granite ashlar.
 - b. Principal story and above: Pennsylvania marble, cut, gray.
 - c. Rear kitchen wing: Brick, headers alternate with stretchers every sixth course.
4. Structural system, framing: Not documented.
5. Porches:
 - a. Central front portico: Wide central stairs, nineteen risers, lead to octastyle of eight fluted Ionic columns with capitals. Both the stairs and columns are of Pennsylvania marble.
 - b. Front and rear verandas: Cast-iron columns and granite piers support the two-story verandas.
6. Chimneys: Coursed Pennsylvania marble above roof of central portion. Other chimneys are elsewhere.
7. Openings:
 - a. Doorways and doors: The front central doors are double with glass lights and wooden panels. They are finished with rectangular sidelights and a Pennsylvania marble surround with an incised drip molding. Single doorways at each end of the verandas give access to exterior verandas.
 - b. Windows and shutters: Wooden sash windows with six-over-six lights. No shutters are present.
8. Roof:
 - a. Shape, covering: Hipped, standing seam metal. The portico roof is gabled.

- b. Cornice, eaves: Cantilevered and molded of Pennsylvania marble.
- c. Dormers, cupolas: Eight double dormers on each wing. Raised central roof in wings with glazed strip window entire length. (This was added at a later time). Glazed cupola over chapel dome.

C. Description of Interior:

- 1. Floor plans: See Original plans and construction in the Historical Information section. All floor plans are generally the same as they were in the earlier years.
- 2. Stairways:
 - a. Basement to principal story: Two, 24-riser open string marble stairs, straight flight, flank axial corridor in open stairwell; metal balusters and mahogany handrail.
 - b. Principal to second story: Two, 26-riser open string marble stairs, straight flight, lead from side passages to central corridor; metal balusters and mahogany handrail with raised brass rail above.
 - c. Second story to attic: One wooden stairway from left corridor in two flights at right angles with landing.
- 3. Flooring: Terrazzo with tile surround in Lobby. Asphalt tile over wood in rooms and corridors. Agnes A. Gilchrist in her book, William Strickland, Architect and Engineer, 1788-1854, published in 1950 by the University of Pennsylvania Press, said that the original floors were of brick, which was selected for its fireproofness.
- 4. Wall and ceiling finish: Both plastered; wooden picture rail; wooden base with top and bottom mold.

Rear wing: Brick vault on tees and plastered.

Basement: Exposed wooden joist 15" on center.
- 5. Openings:
 - a. Doorways and doors: Five-panel wooden with molded wooden surround and lunettes in upper corners of frame with plinth block at bottom.
 - b. Windows: Window trim was not recorded.

6. Mechanical equipment:

- a. Heating: Large tube cast-iron radiators; small fireplaces in end sitting rooms and central office spaces; furnace in basement.
- b. Lighting: Electrical throughout.

D. Site:

- 1. General setting and orientation: The old asylum is parallel to Gray's Ferry Avenue which runs northeast to southwest. A granite wall with an original cast-iron fence fronts the property. Brick fences are on the other sides of the property. Before the front entrance is an elliptical drive with a central circular turn-around. Access roads lead to the Governor's Residence, Surgeon's Residence, and other buildings. Sidewalks are along the roads.
- 2. Landscaping: Sycamore trees line the main driveway and access roads. Flower beds surround flagpole area in front of main entrance turn-around.

PART III. SOURCES OF INFORMATION

- A. Original Architectural Drawings: The National Archives in Washington, D.C. has the original Strickland drawings, available for public view.

B. Early Views:

Oil painting (oil on panel 23 1/2" x 36 1/2"), view from northeast of structure (showing front facade and northeast end), painted by Thomas Doughty (1793-1856) M. and M. Karolik Collection, the Museum of Fine Arts, Boston, Massachusetts.

Woodcut, "Naval Asylum, Philadelphia," Atkinson's Casket or Gems of Literature, Wit and Sentiment, No. 12, Philadelphia, December, 1832, opposite p. 553. View from east of structure (showing front facade).

Lithograph, 1838, by J. C. Wild (c. 1804-1846); printed by J. Collins. Size: 4 7/8" x 6 3/4". Published by J. C. Wild & J. B. Chevalier in Views of Philadelphia, and its Vicinity, Philadelphia, 1838. (Reproduced in George B. Tatum's Penn's Great Town).

Photograph, c. 1908, E. Leslie Gilliams, "A Pioneer American Architect," (William Strickland). The Architectural Record, Vol. XXIII No. 2 (Feb. 1908), p. 127.

Photograph and plot plan, 1912, Public Ledger, Philadelphia, April 28, 1912, Second Section p. 3.

C. Bibliography:

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White, Theodore B. ed. Philadelphia Architecture in the Nineteenth Century. Philadelphia: Philadelphia Art Alliance, 1953. p. 25, plate 22.

Atkinson's Casket or Gems of Literature, Wit and Sentiment, No. 12, Philadelphia, December, 1832, pp. 552-53. Contains a complete description of the construction.

Atkinson's Saturday Evening Post and Bulletin, No. 270, Philadelphia, January 5, 1833, vol XIII, whole no. 597 [p.1].

Public Ledger Philadelphia, April 28, 1912, second section, p. 3.

Hazard's Register of Pennsylvania, Vol. X, November 1832, pp. 284-85.

Skylines, U. S. Naval Hospital, Philadelphia, Penna. vol. 19, No. 4, 12 Apr. 1960.

Philadelphia Inquirer, magazine section, March 22, 1959, p. 12.

Filadelphian, published by Fidelity-Philadelphia Trust Company, Autumn 1963, pp. 3-7.

D. Likely Sources Not Yet Investigated:

Records of John Haviland. Sketch books and business records, 26 vols. 1820-1851, on loan to University of Pennsylvania from the Somerset Archaeological and Natural History Society, England.

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ADDENDUM TO:
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ADDENDUM TO U. S. NAVAL ASYLUM, BIDDLE HALL (U. S. NAVAL HOME)

HABS No. PA-1622-A

Location:

The U. S. Naval Asylum complex is located at the southwest corner of Gray's Ferry Avenue and Twenty-fourth Street, Philadelphia, Independent City, Pennsylvania. The twenty-acre site originally extended to the banks of the Schuylkill River and was framed by Bainbridge Street to the north, Gray's Ferry Avenue to the east, and Schuylkill Avenue to the west. The central building, Biddle Hall, faces southeast towards Gray's Ferry Avenue.

Present Owner: The Toll Brothers Naval Associates
3101 Fillmount Ave.
Huntington Valley, Pennsylvania 19006

Present Occupant: The site is currently unoccupied.

Present Use:

The site has remained vacant since October 1, 1976, when the U. S. Navy closed the facility and transferred the beneficiaries to a newly constructed high-rise Naval Home in Gulfport, Mississippi. This move was completed in anticipation of the need to accommodate a large influx of World War II veterans from the Navy, Marines, and Coast Guard.¹ During the summer of 2003 the City of Philadelphia approved a proposal by Toll Brothers to redevelop the property as an apartment and townhouse community.

Significance:

Designed by William Strickland (1788-1854), one of the first American-born and trained architects, Biddle Hall, the Surgeon General's Residence, and the Governor's Residence represent the largest extant ensemble of buildings by the architect. Biddle Hall, the central building of the U. S. Naval Asylum complex, moreover, is one of the most important surviving examples of early-nineteenth-century Greek Revival architecture in America.

Strickland was one of the first architects to design, specifically, in the Greek idiom as opposed to a more interpretive neoclassicism favored by other architects, such as his mentor Benjamin Henry Latrobe (1764-1820). For Biddle Hall, he drew direct inspiration from depictions of the Ionic temple on the Ilissus River in James Stuart and Nicholas Revett's *Antiquities of Athens* (1762), the definitive sourcebook in this country for architecture derived from Greek examples. While

¹John Dubois, "Old Naval Home May Go to Job Corps," *Philadelphia Bulletin* 24 Mar. 1975: A11.

Strickland obviously looked to the past for expressive inspiration, as an architect he also realized the necessity of designing for the present and the future, and, accordingly, embraced the most up-to-date construction techniques to create a properly ventilated, adequately lit, and fire-resistant retirement and health care facility. Skylights and long verandahs were key elements in the design, one of the earliest masonry-vaulted, fireproof structures in the United States, and also one of the first to be constructed using architectural cast-iron columns. Biddle Hall is not only an aesthetically remarkable and well-proportioned classical edifice, but also a highly functional utilitarian structure embodying the latest healthcare design theories.

Beyond its clear architectural worth, the Naval Asylum also possesses great significance vis-a-vis various aspects of American history. It was the first institution established by the federal government for the care of “disabled and decrepit navy officers, seamen, and marines” of all ranks, making it the first federal veterans’ retirement facility in America.² Biddle Hall was also home to the first formal U. S. naval academy from 1839 to 1845. Additionally from 1833 to 1868 before a separate hospital building was erected on the site, the structure housed the U. S. Naval Hospital, Philadelphia, one of the earliest regional naval hospitals in the country.

The significance of the U. S. Naval Asylum is manifested in its listing on the Philadelphia Register of Historic Places (1956), the Pennsylvania Register of Historic Places (1972), and the National Register of Historic Places (1972). The site was later classified a National Historic Landmark (1975), and in 1997 was designated the “Landmark Building of the Year” by the Philadelphia Chapter of the American Institute of Architects.

Historian: Margaret Tulloch, Summer 2003.

²“An Act Establishing Navy Hospitals,” approved February 26, 1811, Sec. 3. William Paul Crillon Barton, *A Statutory History of the Navy Hospital Fund: With Remarks on Hospital Expenses and the Necessity for Retrenchment: Embracing the Principles on which the Organization of the Bureau Medicine and Surgery of the Navy Department is Based: With a Statistical Appendix, Sustaining the Facts on which the Principles of Economy and Accountability are Rendered Indispensable* (Washington, D.C.: Alexander and Barnard, 1843), 18.

PART I: HISTORICAL INFORMATION

A. Physical History:

1. Date of Erection:

In 1826 construction began on a wharf for landing building supplies floated down the Schuylkill River. Shortly thereafter excavation of Biddle Hall's cellars commenced. It was not until December 3, 1833, however, that the building was dedicated and the first residents—two beneficiaries, Daniel Kleis and William Williams, and fifteen hospital patients—settled into their new quarters.³ Not out of character for contemporary construction campaigns, the building's dedication and use did not coincide with the completion of its interiors, with work lagging on until 1842.⁴ Progress on the interiors was slower than anticipated given repeated difficulties in securing the necessary funds from the Commissioners of Naval Hospitals and Congress. Nevertheless, despite numerous delays no corners were cut and the building was realized much as initially envisioned by both the architect and patron.⁵

In conveying aspirations for the U. S. Naval Asylum at the laying of the cornerstone on April 3, 1827, Commodore William Bainbridge, President of the Navy Board, delivered the following address:

A home will thus be established for the faithful tar who has been either worn out or maimed in fighting the causes of his country – a comfortable harbor will be secured, where he may safely moor and ride out the ebb of life, free from the cares and storms by which he has been previously surrounded. He will here cheerfully and proudly live with his own messmates; with the companions of his former sports, toils and dangers, and where they will animate each other by recounting the pleasures which they enjoyed, the perils which they escaped and the battles which they fought. A picture of happiness will thus be exhibited, not less gratifying to the patriot, than it will be useful; and stimulating the intrepid youth, of our country to enlist under our naval banner, that they also may secure similar honors and comforts for a 'green old age.'

I think the sentiments of my associates in the board of Naval Commissioners, when I say, that we feel the highest satisfaction in witnessing the deposit of the corner stone of an institution, which is calculated to secure so many advantages and to confer so much happiness. And I humbly beseech Him

³Edward Hooker, *U. S. Naval Asylum, A Sketch of Its Origin and History* (1878), 33-34.

⁴Charles Stockton, *Origin, History, Laws and Regulations of the U. S. Naval Asylum, 1794-1886* (Washington, D.C.: Government Printing Office, 1886), 55.

⁵See Part I-A-5 of this report, "original plans and construction."

who governs the sea and the land to bestow his choicest benediction on all those who may here take shelter after an honorable 'march on the mountain waves.'⁶

2. Architect:

William Strickland (1788–1854) not only designed the three primary structures on the site, Biddle Hall, the Governor's Residence, and the Surgeon General's Residence, but also supervised the construction of Biddle Hall,⁷ negotiated contracts with workers and suppliers,⁸ landscaped the grounds,⁹ consulted on later alterations and repairs to Biddle Hall,¹⁰ and even surveyed the property.¹¹ Trained as both an architect and a civil engineer, Strickland was well equipped with the knowledge and experience necessary to carry out such diverse duties with facility and competence. While this multi-talented architect has been somewhat overlooked by architectural historians in recent years, he is acknowledged as one of the first native born and trained American architects, and, perhaps, the very first to design in the Greek Revival idiom, considered the first truly "national" mode of architectural expression in the United States.¹²

Strickland was born in November 1788 in Navesink, New Jersey to Elizabeth and John Strickland, a well-respected carpenter.¹³ The elder Strickland worked on the Bank of

⁶"Naval Asylum," *Niles' Weekly Register* 7 Apr. 1827: 99; Record Group 71-1-3.1. Mid-Atlantic Branch of the National Archives and Records Administration, Philadelphia, Pennsylvania (hereafter Mid-Atlantic NARA).

⁷"Navy Hospitals." Report of the Commissioners of Naval Hospitals upon the State of Their Funds, 15 Jan. 1827, referred to the Committee on Naval Affairs, 19th Congress, 2nd Session, House of Representatives, Doc. No. 54 (Washington, DC: Gales & Reaton, 1827). Record Group 45, Box No. 26. National Archives and Records Administration, Washington, D.C. (hereafter NARA).

⁸William Strickland. Letter to John Branch, John H. Eaton and Samuel D. Ingham, Commissioners of the Naval Hospitals. 1 Dec. 1829. Record Group 45, Box No. 26. NARA.

⁹Joseph Jackson, *Early Philadelphia Architects and Engineers* (Philadelphia: n.p., 1923), 20.

¹⁰"The marble abutments of the front portico of the Asylum have been, for several years past, much impaired by the frost, or by the great weight of the columns which stand immediately behind and press against them....I conversed with Mr. Strickland in reference to the best plan for their improvement, and he thought as efficient a one as any and much the most economical would be to reface them with a hammer and chisel," wrote Governor Charles W. Morgan in 1845. Governor Charles W. Morgan. Letter to George Bancroft, Secretary of the Navy. 11 July 1845. Record Group 24-1-1.1, Correspondence with Naval and Federal Officials, Vol. 2. Mid-Atlantic NARA.

¹¹In 1844, Governor Charles W. Morgan noted, "I forward to you the account of Mr. W. Strickland for making a survey and duplicate map of the grounds of the Asylum." Governor Charles W. Morgan. Letter to Thomas Harris, MD, Chief of the Bureau of Medicine and Surgery. 27 Sept. 1844. Record Group 24-1-1.1, Correspondence with Naval and Federal Officials, Vol. 2, 82. Mid-Atlantic NARA.

¹²Joseph Jackson, in the preface to his work entitled *Early Philadelphia Architects*, writes "William Strickland, The First Native American Architect and Engineer." Jackson, *Early Philadelphia Architects*, preface.; According to William H. Pierson, author of *American Buildings and Their Architects: The Colonial and Neoclassical Styles*, Strickland's design for the Second Bank of the United States (1819-1824) is "closer to the Greek than anything built in this country up to that time, and the intention to create the image of the Doric temple front, isolated and standing by itself is clear beyond question. The building may thus be regarded as the first truly Greek Revival building in America." William H. Pierson, *American Buildings and Their Architects: The Colonial and Neoclassical Styles* (Garden City, New York: Doubleday & Company, 1970), 434.

¹³J. Roy Carroll, Jr., "Early Philadelphia Architects," Meeting of the Genealogical Society of Pennsylvania (25 Oct. 1966), 4.

Pennsylvania (1798-1801), designed by Benjamin Henry Latrobe.¹⁴ As a result, at the age of fourteen William Strickland was apprenticed to Latrobe to learn “the fundamentals of engineering and architectural practice.”¹⁵ According to biographer Agnes Addison Gilchrist “Latrobe had a high opinion of the quickness and ability of his pupil, but also found Strickland to be undependable, independent and difficult.”¹⁶ In 1805 after only a brief period of training Strickland left Latrobe’s office without notice.

Despite its short duration, Strickland’s apprenticeship with Latrobe proved undisputedly valuable for his professional, if not personal, development. During this time, Strickland received formal as well as hands-on training and absorbed a great deal of information. After all, Latrobe was a well-respected architect and one of the first architects to design in the neoclassical idiom in the United States. Latrobe developed his own highly successful, hybrid Greco-Roman approach. According to Kenneth Hafertepe and James F. O’Gorman, co-editors of *American Architects and Their Books to 1848* (2001), “in some respects Latrobe’s work was more Roman than Greek.”¹⁷ Nevertheless, Strickland seems early on to have developed an interest in an archaeologically derived “pure” Greek mode. In an autobiographical sketch penned in 1825 Strickland recalled his days in Latrobe’s office. He reminisced, “At night I copied the Engraved plates and read the letter press of Stuarts Athens, Ionian Antiquities &c; and was soon enabled, by contrasting these works with *Batty Langley, Swan* & my father’s *bench mate*, to discover the graceful forms of Grecian Architecture.”¹⁸

In 1807 Strickland joined his father in New York City where he was helping to rebuild the Park Theatre, and painting scenery for productions at the playhouse. A year later, he returned to Philadelphia, calling himself a landscape painter.¹⁹ Strickland was, in truth, an accomplished painter and even exhibited a large oil painting of Christ Church in Philadelphia at an 1811 exhibition sponsored by the Pennsylvania Academy of Fine Arts and the Columbia Society of Artists.²⁰ Despite his obvious talent for painting, Strickland’s ultimate trajectory became architecture; before his twenty-first year, he won the architectural competition for Masonic Hall (1809–1811) using a Gothic design proposal. This was the first of many important commissions he eventually would receive, although at this time he was still engaged primarily in surveying, mapmaking, engraving, and theatrical scene painting. During the War of 1812, Strickland helped to supervise defenses for Philadelphia. After the war ceased, Strickland’s architectural career flourished.

¹⁴Agnes Addison Gilchrist, *William Strickland: Architect and Engineer, 1788-1854* (Philadelphia: University of Pennsylvania Press, 1950), 1.

¹⁵Carroll, 4.

¹⁶*Ibid.*

¹⁷Kenneth Hafertepe and James F. Gorman, eds., *American Architects and Their Books to 1848* (Amherst: University of Massachusetts Press, 2001), 114.

¹⁸*Ibid.*; Hafertepe and Gorman also note, “The books he refers to are English, unspecified titles by Batty Langley (1696-1751) and Abraham Swan (fl. 1740s-60s); the last was most likely Batty Langley, *The Builder’s Director, or Bench-mate* (London, 1747).” *Ibid.*, 128.

¹⁹Joseph Jackson, *Encyclopedia of Philadelphia*, 4 vols. (Harrisburg: The National Historical Association, 1931), 1119.

²⁰Gilchrist, 2.

Between 1815 and 1818 several of Strickland's designs were under construction in Philadelphia, including: The Friends' Asylum for the Insane (1815-1817), the Temple of the New Jerusalem (1816), St. John's Episcopal Church (1817), the Medical Museum at the University of Pennsylvania (1818), and the Philadelphia Custom House (1818-1819).²¹ In 1818 Strickland won first premium, while his mentor Latrobe received the second, for the design of the Second Bank of the United States (1819-1824), employing a Greek scheme based on the Parthenon in Athens.²² Strickland not only designed this monumental classical edifice, but also superintended its construction, an opportunity that no doubt afforded him valuable experience for his subsequent work on the Naval Asylum. This commission was, perhaps, the most important of his career and immediately established Strickland as one of the foremost American architects of the day.

Strickland was also recognized as one of the nation's leading engineers and, in 1825, was sent to Great Britain for eight months as a special agent for the Pennsylvania Society for the Promotion of Internal Improvement to study the advantages and disadvantages of shipping goods via railroads versus canals. He was also charged with learning "the construction of breakwaters, roads, gas plants, iron smelting, printing of calico" and so forth.²³ Upon his return, Strickland was appointed head engineer of the Eastern Division of the Pennsylvania Mixed System of railroads and canals. He resigned this post in 1827, but continued his engineering activities as a consultant for the Columbia and Philadelphia Railway, as author of a report in 1828 on the Fair Mount Dam, and as the supervising engineer for the Delaware Breakwater between 1828 and 1841.²⁴

During the 1820s and 1830s, Strickland also received several significant architectural commissions, most of which were for institutional buildings, as well as a few church structures.²⁵ Perhaps his best known commission during this prolific period was his design for the Merchant's Exchange in Philadelphia (1832-1834). According to Joseph Jackson, author of *Prints, Documents and Maps Illustrative of Philadelphia Real Estate in the Office of Mastbaum Bros. & Fleisher* (1926), "for a quarter of a century, it [the Merchant's Exchange] was the most frequently pictured structure in Philadelphia."²⁶ As the depression of the late 1830s and early 1840s worsened, Strickland received fewer and fewer commissions. When asked in 1845 to design the Tennessee State Capitol (1845-1859) in Nashville, Tennessee, he eagerly accepted the position and moved south. This structure proved to be his last commission of

²¹Sandra L. Tatman and Roger W. Moss, *Biographical Dictionary of Philadelphia Architects, 1730-1930* (Boston: G. K. Hall & Co., 1985), 768-769.

²²Gilchrist, 4.

²³*Ibid.*, 6.

²⁴*Ibid.*, 7.

²⁵Such commissions included the U. S. Custom House in New Orleans (1819-1821), Western State Penitentiary in Pittsburgh, Pennsylvania (1820-1827), the Orphans' Society of Philadelphia Building (1823), the U. S. Naval Asylum (1826-1833), the Academy of Natural Sciences (1826-28), the Naval Hospital in Pensacola, Florida (1828), the U. S. Mint (1829-1833), Blockley Almshouse (1830-1834), the U. S. Branch Mint in Charlotte, North Carolina (1835), the U. S. Branch Mint in New Orleans, Louisiana (1835-1836), the Providence Athenaeum in Providence, Rhode Island (1836), The Mechanic's Bank (1837), and the Sussex County Courthouse in Georgetown, Delaware (1839).

²⁶Joseph Jackson, *Prints, Documents and Maps Illustrative of Philadelphia Real Estate in the Office of Mastbaum Bros. & Fleisher* (Philadelphia, 1926), 50.

note, although he also designed several substantial country houses and two churches in and around Nashville during his later years. After 1850 Strickland's health began to fail and in April 1854 he passed away and was interred in a niche in the north portico of the Tennessee State Capitol.²⁷ Over the course of a long and busy career, he proved himself a capable architect, engineer, surveyor, and painter. According to historian E. Leslie Gilliams, during his most active decades William Strickland "was very generally recognized as the leading native architect in America."²⁸

3. Original and subsequent owners, occupants, uses:

On behalf of the United States, Thomas Harris, a surgeon in the U. S. Navy, purchased a tract of land near Philadelphia from Timothy and Ann B. Abbott for the sum of approximately \$16,000 on June 22, 1826.²⁹ The land was initially bought with a location for planned Philadelphia Naval Hospital in mind, but it was later determined that the tract would also serve as an excellent site for the erection of the proposed U. S. Naval Asylum, the first veterans' retirement facility in the country established by the federal government.³⁰ From its completion in 1833 until the 1868 erection of Laning Hall, an independent hospital building, Biddle Hall served not only as a retirement, but also a hospital facility.³¹ In addition to its aforementioned dual functions, Biddle Hall was also home to the first organized U. S. naval academy between 1839 and 1845. Although its name was changed to the U. S. Naval Home in 1889, Biddle Hall continued to serve as the flagship retirement facility for Navy, Marine, and Coast Guard personnel until its doors were closed on October 1, 1976, and the beneficiaries were transferred to a newly constructed high-rise in Gulfport, Mississippi.³²

At this time, the U. S. Navy turned the Naval Home over to the General Services Administration as surplus property. Per the federal surplus process, the buildings were first offered to other federal agencies, then state agencies, and finally local governments.³³ Eventually the property was offered for sale to the private sector.³⁴ In 1981 it was sent to auction and on March 19, 1982 the General Services Administration accepted a \$1.2 million bid from Toll Brothers, the self-described largest builder of luxury homes in the United States.³⁵ After a six-year option Toll Brothers executed the deal in 1988, but since taking possession of the property, the company has neither occupied nor used the buildings or grounds. Over the years Toll Brothers proposed several redevelopment schemes which were

²⁷ Gilchrist, 19.

²⁸ E. Leslie Gilliams, "A Pioneer American Architect," *The Architectural Record* Vol. XXIII, Jan. – June 1908: 123-124.

²⁹ Stockton, 11.

³⁰ Edward Shippen, "Some Account of the Origin of the Naval Asylum at Philadelphia." *The Pennsylvania Magazine of History and Biography* Vol. VII, No. 2 (1883): 128.

³¹ See Part II. D. 2. *Other significant structures on the site, Laning Hall.*; J. B. Smith, *The United States Naval Home and Its Governors* (4 Sept. 1964).

³² Richard J. Webster, *Philadelphia Preserved: Catalog of the Historic American Buildings Survey* (Philadelphia: Temple University Press, 1976), 187.

³³ Mark Brakeman, "City Presses for Repairs of Fire Ravaged Naval Home," *Weekly Press* (26 Feb. 2003).

³⁴ General Services Administration, "General Services Administration Invitation of Bids, Bid and Acceptance for Sale of Government Property" (1981).

³⁵ "Navy Home," <http://www.southphillyblocks.org/photos_essays/navyhome/>.

rejected by City officials. It was not until the summer of 2003 that a redevelopment plan transforming the site into a townhouse and condominium community was approved by the City of Philadelphia.

4. Builder, contractor, suppliers:

William Strickland, in his capacities as both architect and construction superintendent, took it upon himself to not only hand pick the finest master craftsmen and most experienced overseers, but also to personally negotiate the supply contracts. Strickland's younger brother, George, was appointed Clerk of the Works by the Commissioners of the Navy Hospital Fund, perhaps in an effort to console him for not having been selected "Architect of the Naval Asylum" from submissions in a limited design competition. In general, however, Strickland himself appointed the artisans, workmen, and suppliers while personally obtaining agreements for workers and materials below market rates.³⁶ Writing to the Commissioners of the Navy Hospital Fund in December 1829, Strickland asserted that "every attention has been paid to economy in the disbursement of the public funds from the earliest commencement of the work to the present day. The contracts which were made by myself at the laying of the cornerstone of this edifice, for marble—bricks—lime—etc. were at the time and still remain considerably below the market price of these articles."³⁷

Strickland, of course, had gained relevant experience over the years. As both an apprentice to Benjamin Henry Latrobe and an independent architect, he participated in and oversaw large construction projects in the City of Philadelphia, thereby making numerous valuable contacts and also honing shrewd negotiation skills. With a background in engineering Strickland was perhaps better able to supervise and guide the construction process than others trained solely as architects. He naturally tapped those workers and suppliers who had met or exceeded expectations on previous commissions. For instance, he turned to a close personal friend, John Struthers, and asked him to oversee the marble work. The two had worked together on numerous projects, including the highly acclaimed Merchant's Exchange. Some of the many superintendents, craftsmen, and suppliers involved in the construction of Biddle Hall are listed below.

Superintendents of Construction – William Strickland and Thomas Harris³⁸

³⁶In an 1829 letter to the Commissioners of the Naval Hospitals, Strickland asserted: "Gentlemen, I deem it proper in addition to my last communication respecting the increased expenditure on the building of the Naval Asylum at this city to submit for your information an abstract from the contracts, setting forth the prices at which they were originally made, which will be found by exact scrutiny to be in all instances below the market prices of the present day." William Strickland. Letter to John Branch, John H. Eaton, Samuel D. Ingham, Commissioners of the Naval Hospitals. 18 Apr. 1829. Record Group 45, Box No. 26. NARA.

³⁷William Strickland. Letter to John Branch, John H. Eaton and Samuel D. Ingham, Commissioners of the Naval Hospitals. 1 Dec. 1829. Record Group 45, Box No. 26. NARA.

³⁸According to Hooker, "When the construction of the building was begun, Dr. Harris was detailed by the Secretary of the Navy to superintend it with a view, no doubt, of securing the best possible sanitary

Landscape Architect – William Strickland³⁹
Surveyor – William Strickland⁴⁰ (1844)
Clerk of the Works – George Strickland (younger brother of William Strickland)
Superintendent of the Naval Asylum – James McClure⁴¹ (during construction hiatus)
Superintendent of Marble Masons, Marble Mason for Mantles – John Struthers
Superintendent of Plasterers – William Jones
Measurer of Carpenters' Work – Joseph Worrell
Head Carpenter – John O'Neill
House Carpenter – James McClure
Carpenter – John Mull
Turning Work – Elisha W. Cook, Jacob Mitchell
Fence Builders – John McClure and Henry Simmons
Supplier of Boards for Fence – Isaac Roach
Lumber Suppliers – Keyser and Longstreth, T. M. & J. M. Linnard, Robert McMullen, Jacob Mayland, Isaac Roach, E. W. Cook, Adams & Grover, Lehigh Coal and Navigation Co., Robert W. McKean
Cedar Posts – Tm. and Sm. Lennard
Lath – Josiah Bunting, Jacob Mayland
Mahogany Supplier – Jacob Mitchell, Elisha W. Cook
Brick Supplier – James Harper of Philadelphia
Marble Supplier – Davis Henderson of Montgomery County
Supplier of Rough Stone for Ashlar, Building Stone – Provost & Byrne
Suppliers of Building Stone and Granite for Piers – George G. Leiper, Esq. of Delaware County

conditions in its construction, and for this service he received a certain sum per annum, over and above his regular pay. Rumor says his sum was \$1,000. Mr. Strickland, the architect, was associated with him in the superintendence." Hooker, 26.; Nonetheless, Strickland was in charge of the day-to-day superintendence, the negotiation of contracts with craftsmen and suppliers and the oversight of the construction. Harris, with his medical expertise, seems to have acted more as an advisor to Strickland throughout the design and construction phases to ensure that the building would be of a salubrious design, well-suited for the needs of both beneficiaries and patients. Strickland served as Superintendent until December 1829, at which point George Harrison, the Navy Agent for Philadelphia, assumed this position. Dr. Harris, however, continued his involvement until 1833.

³⁹See Part II-D-1, "historic landscape design."

⁴⁰"I forward to you the account of Mr. W. Strickland for making a survey and duplicate map of the grounds of the Asylum," wrote Governor Charles W. Morgan to the Chief of the Bureau of Medicine and Surgery in 1844. Charles W. Morgan, Governor. Letter to Thomas Harris, MD, Chief of Bureau of Medicine and Surgery and etc.. 27 Sept. 1844. Record Group 24-1-1.1, Correspondence with Naval and Federal Officials, Vol. 2, 82. Mid-Atlantic NARA.

⁴¹When construction of the Asylum was halted in 1829 for financial reasons, James McClure was hired as the Superintendent of the Naval Asylum to protect the site from vandals. He and his wife resided in Biddle Hall and he occupied his time by completing the interior carpentry work. Records indicate that he was most likely hired in 1829 and continued to serve as the caretaker until at least the summer of 1832. "G. Harrison the Navy Agent has procured a trusty man to take care of the Building who resides in it with his wife," wrote Commodore William Bainbridge to the Commissioners of the Naval Hospitals in 1829. Commodore William Bainbridge. Letter to the Commissioners of the Naval Hospitals. 16 Dec. 1829. Record Group 45, Box No. 205. NARA.; In 1831, Secretary of the Navy Hospital Fund Bradford wrote, "Mr. McClure has been generally furnished with materials to go on with his labor as House Carpenter for the Asylum." Secretary of the Navy Hospital Fund Bradford. Letter to ? 3 ? 1831. Record Group 45, Box No. 205. NARA.

Slate Supplier and Layer – John R. Griffiths of Philadelphia
Supplier of Flag Stones for Pavement – Prichard, Sweetman & Roberts, George G. Leiper,
William Prickett
Gravel Supplier – Frederick Myley
Bar Sand Supplier – Peter B. Walter
Sawing Sand Supplier – Joseph Howell
Plastering Hair Suppliers – John Oakford, Joseph Rhodes, M. & D. Lonber, William J.
Lowber, John Pratt
Lime Supplier – George W. Holstein of Montgomery County
Plaster of Paris – Arthur Farnien
Painters and Glazers – Myer & Jones of Philadelphia
Paint and White Lead Supplier – Samuel L. Wetherell & Sons
Oil and Paint Supplier – John P. & Charles Wetherell
Supplier of Lead and Oil for Handrail – George D. Wetherell
Copper and Tinsmith – John Harned of Philadelphia
Supplier of Roofing Copper – Robert Kid
Plumbers and Plumbing Suppliers – J. and W. Ewing of Philadelphia
Iron and Coal Suppliers – Morris & Johnston, E. E. Maddock
Charcoal Supplier – John McClure
Ironmonger – Edward Bowlby & Son
Craftsman for Iron Railing Panels and Iron Banisters – James Lane
Casting Work on Verandahs – Samuel Richards
Supplier of Nails and Spikes – Francis G. Smith
Supplier of Nails for Fence – Haven & Smith
Supplier of Screws for Handrail – Isaac B. Baxter
Hardware – Edward Bowlby & Son
Supplier of Two Furnaces – James Skerrett
Furnace Installer – Jacob Souder
Cordage Supplier – David Myerle
Riggers Work, Hoisting Marble – Ebert & Hogerbert
Rigger – Peter Ebert
Smith Work on Electric Conductors (for lightning rods) – Henry Simmons
Laying Electric Conductors (for lightning rods) – Thomas Cahill
Points for Electric Conductors (for lightning rods) – J. Dobson, Washington Jackson⁴²

5. Original plans and construction:

Guided by the building program and stated needs of the Board of Navy Commissioners, and undoubtedly influenced by the design of the great European institutions such as Greenwich Hospital and Les Invalides, and the work of his mentor Latrobe on plans for a naval hospital and asylum in Washington, D.C., Strickland nonetheless made Biddle Hall a work of his own intellect and creativity.⁴³ Working within the Greek Revival mode he helped to popularize,

⁴²Information regarding the aforementioned workmen may be found in the numerous letters, contracts and bills assembled in Record Group 45, Boxes Nos. 551 and 205, at the NARA.

⁴³See Part II-B, “Historical Context, The Call for the U. S. Naval Asylum and The Design of the U. S. Naval Asylum.”

Strickland succeeded in creating a functional, utilitarian retirement facility that was also a monumental, publicly funded building. In his own words, Strickland described his oeuvre, writing:

The Building is situated on the river Schuylkill, a short distance below the junction of South Street with the Grays Ferry road. It is 385 feet in front including a centre building 142 feet by 135 feet in depth, which is embellished with a marble portico of eight Ionic columns 3 feet each in diameter. The wings consist of a granite basement supporting a marble superstructure three stories in height, with Piazzas or Verandas on each story of the front and rear, raised on 88 cast iron columns, resting upon granite piers.

The interior of the building is vaulted throughout, and is in every respect completely fire proof. The roof of the centre is covered with copper, and that of the wings with slate.

The dormitories on the flanks of the centre building contain 180 rooms, all of which are well lighted and ventilated and are calculated for the reception and accommodation of about 400 men. The extremities of the wings contain a Hall – Workshop – Operating room – and Office; all of which have a communication with the Piazzas on the outside and the passages from the centre of the building.

The basement story of the centre building contains a dining room 112 feet in length, together with a kitchen – washhouse – laundry – pantries – store office and warming apparatus. This story has an immediate communication with the principal and third stories by a flight of marble steps leading to the portico on the outside, and by a double flight of steps of the same material from the hall on the inside of the building.

The principal story of the centre building contains in front 8 parlors intended for officers' quarters, and a chapel in the rear 56 feet square, which receives its light from a lantern in the dome and has a direct communication with the passage in the centre and the piazzas on the outside of the building. The surgeon's apartment – infirmaries – apothecary's room – bathrooms, and closets are adjacent to the chapel and main interior passage.

The attic or third story of the centre building includes chambers for the officers and governor or manager of the institution – apartments for the insane – bath rooms, closets, etc., etc..

The whole of the interior of the building will be finished in about three weeks from this date. The carpenters have put a few doors and sashes to hang. The plasterers will complete the plastering in the course of next week, and the painters have but the finishing coat to put on.

The whole of the marble work of the building and portico with the exception of a small part of the raking cornice and tympanum of the pediment and of the flight of steps in front leading to the portico, is finished: These parts of the work

would have been completed at this day, but, that I have been unable to procure in this season from the quarries such blocks of stone as are necessary for their completion. Under these circumstances I have however deemed it expedient to close in a few days from this time the operations of the marble masons until the ensuing spring.⁴⁴

Working with Thomas Harris, an influential Naval surgeon, Strickland saw the Naval Asylum built as he initially designed it, an occurrence that so rarely happens with a public building project.

6. Alterations and additions:

While Biddle Hall appears much as it did when first erected, numerous alterations were made to the structure over the years. Most of the modifications encompassed minor changes aimed at improving the facility's comfort and functionality. Perhaps the most significant changes were the enlargement of the structure through the addition of a cellar ca. 1843 and the transformation of what had been an attic into a habitable third story ca. 1846. In terms of substantial additions, the only one of note was the so-called Biddle Hall Annex, a three-story brick addition with a standing seam metal roof attached to the west side of the central pavilion. Completed on February 5, 1890 at a cost of approximately \$17,500, this addition was of an unassuming, vernacular design in stark contrast to the high-style Greek Revival Biddle Hall.⁴⁵ The walls were regularly pierced with standard window openings and the long sides were marked with two chimneys each. Decorative elements were minimal, limited to a continuous corbelled brick cornice and oculus windows on each narrow end.⁴⁶ Despite its simple construction, according to Edward Hooker's manuscript (1878 with subsequent addenda by Asylum personnel) detailing the history of the Asylum, "this annex building was a great improvement, it added to the Home, a really very fine, large, light and convenient kitchen, an ironing room and a laundry and on the second floor, quarters for the matron and the female attendants ... The old kitchen was made ready for the placing of the bath tubs, making it a very good bathroom for the beneficiaries."⁴⁷ Demolished ca. 1992, only the Annex's scars on the west side of Biddle Hall endure.

Some of the more notable alterations to Biddle Hall include:

1833	Marble façade added to west elevation, in lieu of originally planned roughcast façade.
1842	Building divided into asylum and hospital wings by lath and plaster partition designed by Strickland himself.
ca. 1843	Cellar dug beneath the building.
1844	Lath and plaster partition removed.

⁴⁴William Strickland. Letter to John Branch, John H. Eaton and Samuel D. Ingham, Commissioners of the Naval Hospitals. 1 Dec. 1829. Record Group 45, Box No. 551. NARA.

⁴⁵Hooker, 245.

⁴⁶Wallace Roberts and Todd; Day and Zimmerman Associates; Hammer, Siler, George Associates, *U. S. Naval Home Reuse Study, Philadelphia, Pa.* (Philadelphia, 1980,) 15.

⁴⁷Hooker, 245-246.

ca. 1846	Attic story rendered habitable, through the raising of the roof and the addition of dormers and a continuous light monitor.
1852	Wings of roof retinned.
1862	Acoustical modifications to rotunda.
1890	Construction of three-story Biddle Hall Annex on the west elevation.
1915	Water tanks installed on third floor over portico.
1929	Skylights added over main stairwells.
1934	Dormer windows replaced.
1937	Central pavilion roofed in zinc-coated copper.
1944	Hot and cold water piping replaced and lavatories in terminating pavilions renovated.
1943	Elevator installed.
1953	Fire towers on west elevation of terminating pavilions added, along with a new elevator. ⁴⁸

B. Historical Context:

The Call for a U. S. Naval Asylum

In 1798, Congress passed a law taxing all seamen of the merchant marine twenty cents per month for the dual purpose of providing for sick and disabled seamen and the physical establishment of hospitals.⁴⁹ One year later, another law was enacted which called for the collection of twenty cents monthly from all persons in naval service, not just those in the merchant marine, and extended the benefits initially directed for the sole benefit of merchant sailors to all navy seamen. The collected monies were to be kept in a hospital fund administered by the Secretary of the Treasury.⁵⁰ Perhaps one reason Congress took such action was that seamen in the Royal Navy mutinied in 1797 and seized control of the fleet at Spithead. The primary grievances cited by the sailors were the abysmal treatment of the sick on board the ships and the rampant embezzlement of funds allotted by the British government for their care.⁵¹ As the young government of the United States continued to look to England as a model in the administration of its armed forces, this mutiny undoubtedly served as a warning shot across its bow.

No formal hospital or retirement system was immediately forthcoming after the passage of the laws of 1798 and 1799. As the Navy expanded, however it became increasingly evident that the existing system of care, or rather lack thereof, was grievously inadequate. According to Edward Shippen of the U. S. Navy, author of "Some Account of the Origin of the Naval Asylum at Philadelphia:"

⁴⁸Roberts et al., 19-20.

⁴⁹Stockton, 7.

⁵⁰*Ibid.*

⁵¹William Paul Crillon Barton, *A Treatise Containing a Plan for the Internal Organization and Government of Marine Hospitals in the United States; Together with Observations on Military and Flying Hospitals, and a Scheme for Amending and Systematizing the Medical Department of the Navy* (Philadelphia: Printed for the Author, 1817), 5.

Under the operation of this law complaint was justly made that naval seamen had to be sent to civil hospitals, where their officers lost control of them, and they disappeared. Nor did it seem proper, that officers, seamen, and marines of a military service, should, as a sort of afterthought, be foisted upon the Treasury Department.⁵²

The need for a federally owned and operated network of hospitals and retirement facilities was clear. On February 22, 1810 Paul Hamilton, Secretary of the Navy, addressed a letter to the B. Bassett, Chairman of the Naval Committee of the House of Representatives, regarding this unsatisfactory state of affairs. Troubled, he wrote:

The inconveniences and embarrassments which arise from the placing of persons, engaged under military laws in the public service, in hospitals where no such laws exist have escaped the attention of Congress. In the few cases which have existed of any seamen being sent to such hospitals, experience has proved that the commanding officers of the ships from which they were sent would never get returns made to them, and that, on an average, three out of five have deserted as soon as they get in a convalescent state. Hence the propriety of having distinct establishments for the relief of sick officers, seamen, and marines of the Navy.⁵³

Hamilton's letter had an almost immediate positive effect, as well as beneficial long-term ramifications. According to Charles Stockton, in his *Origin, History, Laws and Regulations of the U. S. Naval Asylum* (1886), "the practicable portion of the suggestions have borne fruit in the naval pension and naval hospital funds, the Naval Academy, and the Naval Asylum, and should perpetuate most honorably in our history the name of the writer."⁵⁴ That is, that same year, an Act of Congress appointed the Secretaries of War, the Navy and the Treasury as the "Board of Commissioners of Naval Hospitals." The twenty cents a month collected per the laws of 1798 and 1799 was, by this act, to be turned over to these Commissioners to constitute a "Naval Hospital Fund" and the \$50,000 from the unexpended balance of the "Marine Hospital Fund" established in 1798 was transferred to this new fund.⁵⁵ On February 26, 1811, almost exactly a year after Hamilton penned his influential letter, Congress not only authorized, but also required the Commissioners of Naval Hospitals to:

procure, at a suitable place or places, proper sites for Navy hospitals, and if the necessary buildings are not procured with the site, to cause such to be erected, having due regard to economy and giving preference to such plans as with most convenience and least cost, will admit of subsequent additions as the funds will

⁵²Shippen, 126.

⁵³Stockton, 8.

⁵⁴*Ibid.*, 9.

⁵⁵Shippen, 126.

permit and circumstances require; and the commissioners are required at one of the establishments to provide a permanent asylum for disabled and decrepit Navy officers, seamen and marines.⁵⁶

This act established the legal framework for the creation of the U. S. Naval Asylum.

Shortly after the passage of the act, the Commissioners held a series of meetings regarding the establishment of naval hospitals. They determined to erect the asylum called for in the 1811 act in the nation's capital. According to Stockton: "several sites were surveyed, and Mr. Latrobe, a distinguished architect, prepared a plan of the buildings. Plans were also produced by Surgeons Cutbush and Marshall, and hopes entertained that a 'Greenwich Hospital' would be commenced in the capital city, but the funds were found to be inadequate."⁵⁷ William Paul Crillon Barton in his influential work entitled, *A Treatise Containing a Plan for the Internal Organization and Government of Marine Hospitals in the United States; Together with Observations on Military and Flying Hospitals, and a Scheme for Amending and Systematizing the Medical Department of the Navy* (1817), recounted:

The talents of that able engineer, Mr. Latrobe, were employed by the secretary of the navy, for the designing of an architectural plan of the buildings to be erected. This plan was admirably calculated for the erection of permanent and convenient edifices, to which, from time to time, as exigencies might require, or the hospital fund admit, additions might be made, so that when the whole was completed it would present one entire and perfect building. In this plan he had exceedingly well combined the requisite economy, so far as compatible with the ultimate object of the law, with that simplicity, elegance, and convenience, which characterize all the works of this master architect. This plan met with the warmest approbation of the secretary of the navy, but was objected to by the other two commissioners, for those qualifications which ought to have entitled it to their favorable opinion, viz. its permanency and stability. The business therefore fell through, and the whole plan proved abortive.⁵⁸

The ensuing War of 1812 did not improve matters, and by 1817 still no hospitals or retirement facilities had been constructed; the situation was indeed dire. Barton, a surgeon in the Navy stationed at the Philadelphia Navy Yard and author of the aforementioned treatise, lamented:

I have myself seen, among a number of sick seamen with whom I was left in charge at the navy yard of this place [Philadelphia Navy Yard, approximately 1813], where they were necessarily huddled into a miserable house, scarce large enough to accommodate the eighth part of their number – a spirit of impatience, and even of revolt, in those who were able to discover it, that was calculated to

18. ⁵⁶An Act Establishing Navy Hospitals, approved February 26, 1811, Sec. 3. Barton, *A Statutory History*.

⁵⁷For more on Greenwich Hospital, see Part I-B, "Historical Context, The Design of the U. S. Naval Asylum."

⁵⁸Barton, *Treatise*, 2.

contrive the most serious injury for the service. So wretched was the hovel, and so destitute of every necessary comfort for sick persons, in the charge of which I was left with thirty patients...that every man who gathered sufficient strength, and was successful in getting an opportunity to effect his escape, absconded immediately.⁵⁹

Barton's writings were instructive, as his 240-page book on marine hospitals helped to guide the reorganization of the Navy's medical system and ultimately influenced the design of naval hospitals.⁶⁰

Barton, however, was not the only one bemoaning the dreadful conditions of afflicted and disabled seamen. On June 30, 1818 Samuel R. Revett of the U. S. Navy Yard in Charlestown, Massachusetts replied to a request by Benjamin Crowninshield, Secretary of the Navy, regarding the " 'the different places in the United States in which provision is made for the accommodation of seamen.' " ⁶¹ He declared, "on this station there is no hospital or other building, under the control of the Navy Department, appropriated to that purpose. Our sick have been placed generally on board the hulk of an old merchant vessel; and are at present residing in the frigate *Java*, lying in ordinary. The unsuitableness of these places to accommodate sick men is too apparent to require any comment."⁶²

During the War of 1812, money from the fund established for the purpose of caring for sick and disabled seamen was appropriated for other uses, such as the pay of Navy personnel. Application was made both by the Secretary of the Navy and the Commissioners for the return of this money. In 1824 it was reported that \$119,712.95 was due and in 1827 the government pledged to repay the above sum to the fund, with interest; the monies were finally appropriated by Congress in 1829.⁶³ While such financial matters were hotly debated in Washington, D.C., the Board of Commissioners of Naval Hospitals in the meantime authorized the acquisition of land for the establishment of the hospitals and asylum called for in 1811.⁶⁴

The Selection of the Site

The Board of Commissioners of Naval Hospitals purchased several tracts of land between 1823 and 1827, most of which were adjacent to well-established military installations. In

⁵⁹*Ibid.*, 5.

⁶⁰The Secretary of War requested 100 copies to be distributed to the principal officers of the army medical staff. Likewise the Navy Department initially ordered fifty copies and, subsequently, forty more. *Ibid.*, forward.; A copy was even ordered by the U. S. Naval Asylum in 1838. A list of books sent to the Asylum included: "21 volumes American State Papers (complete), 1 volume American Archives, 9 volumes American House Journal, 12 volumes Jared Spars' Diplomatic Correspondence, 1 volume Commodore Hulls Trial, 1 volume Commodore Barrons Trial, 1 volume Proceedings of Court of Enquiry on Commodore Barron, 1 volume Naval Laws, 1 volume Barton on Naval Hospitals, 1 volume Rules and Regulations for Naval Service." John Boyle, Acting Secretary of the Navy. Letter to Commodore James Biddle. 31 Oct. 1838. Record Group 24-1-1.1, Correspondence with Naval and Federal Officials, Vol. 1, 35-36. Mid-Atlantic NARA.

⁶¹Samuel R. Revett, U. S. Navy Yard in Charlestown, Massachusetts. Letter to Honorable Benjamin Crowninshield, Secretary of the Navy. 30 June 1818. Record Group 45, Box No. 206. NARA.

⁶²*Ibid.*

⁶³Stockton, 11.

⁶⁴*Ibid.*

September 1823, the Commissioners acquired land in Chelsea near the Navy Yard in Charlestown, Massachusetts.⁶⁵ In May 1824 they took possession of property near the Navy Yard in Brooklyn, New York, and land in Philadelphia, Pennsylvania along the Schuylkill River not far from the Philadelphia Navy Yard in June 1826. In January 1827 they contracted for land adjoining Fort Nelson in Norfolk, Virginia and also acquired land in Pensacola, Florida around this time.⁶⁶ The intention of the Commissioners was to establish efficient, modern, federally owned and operated hospitals at these key sites.

In 1826 the Samuel L. Southard, then Secretary of the Navy, authorized Thomas Harris, the prominent Navy surgeon who had distinguished himself with Jacob Jones aboard the *Wasp* and James Biddle aboard the *Hornet*, to purchase the aforementioned land along the Schuylkill River in Philadelphia. The lot consisted of between twenty-five and thirty acres and was acquired for approximately \$16,000.⁶⁷ The land that Harris purchased, known as the Pemberton "Plantation" an old Philadelphia colloquialism for farm,⁶⁸ was originally owned by the Penn family who sold it in 1735 to Thomas Masters, who later sold it to the Abbotts.⁶⁹ The Plantation originally embraced some 500 or 600 acres along the Schuylkill River between South Street and Grey's Ferry Avenue. During the British occupation of Philadelphia the Pemberton mansion was commandeered by the General Pattison, Chief of Artillery. Upon the British evacuation Alexander Hamilton resided in the house, penning several important state papers there.⁷⁰

The property, located on the highest point of land between the mouth of the Schuylkill River and the celebrated Fairmount Waterworks, was highly desirable.⁷¹ Bearing a spacious dwelling and verdant lawns that sloped toward a broad, navigable river, Pemberton Plantation was an idyllic site. The government acquired this valuable tract of land with the intention of moving the so-called hospital associated with the Philadelphia Navy Yard, which had already been moved once from the shipyard to League Island, to this new location. If Barton's description is any indication the facility's character, it was clear why immediate and sweeping changes were necessary. In fact, Barton was surely thrilled with the acquisition of this site, as it was a near perfect match to his vision of an ideal "situation" for the construction of a naval hospital. In his treatise, Barton prescribed:

In warm climates and in *temperate latitudes*, a dry and airy place, at a good distance from marshes or large and thick woods, and out of the reach of winds that blow over such places, should be chosen. If possible, it should be *on an elevation*, protected from the inclement winds; *fronting the south* or west, and *having a good command of water*. Much depends upon erecting hospitals in

⁶⁵For an image of the hospital erected thereupon, see: *Marine Hospital, Chelsea*. Engraving (3" x 3.5"). Print Collection (Hospitals, Small Size), Historical Society of Pennsylvania.

⁶⁶"Navy Hospitals. Report of the Commissioners of Naval Hospitals upon the State of Their Funds."

⁶⁷Albert Gleaves, "The United States Naval Home," *U. S. Naval Institute Proceedings* (Apr. 1931): 473.

⁶⁸"*Veterans, 1929-1946*," (19 Nov. 1939) Photo caption. *Philadelphia Record* Photographic Morgue. Historical Society of Pennsylvania. Philadelphia, Pennsylvania.

⁶⁹"History of the United States Naval Home, Phila., PA," *Navy Day* (1936).

⁷⁰Gleaves, 473.

⁷¹Unidentified Newspaper Clipping (1854). Poulson's Diary, Vol. VII, 178. Library Company of Philadelphia.

proper situations, as regards healthiness; and the accounts of British naval writers are replete with instances of the fatal effects of establishing hospitals in damp or marshy situations. If convenient, there should be a water-carriage up to the receiving door ... for the purpose of conveying patients without motion from ships to the hospital. This would set forth the propriety of erecting the hospitals *in the neighborhood of rivers, which communicate with the sea by a ready conveyance*, and whose borders are not judged unhealthy. This, however, is a consideration which must be influenced by circumstances, of which the engineer employed to draw the plans of the hospital, is the most proper judge.⁷² [emphasis added]

The site was also advantageous in that it was located near a major metropolitan center along an important thoroughfare (now Gray's Ferry Avenue), yet was still essentially in the country. Early views of the property depict a bucolic setting complete with cows and cowherds.⁷³ Period thinking found that pastoral settings of this nature were far more salubrious than their urban counterparts, providing physical, mental, moral, and spiritual benefits. Patients, it was thought, reaped untold rewards from fresh air, sunshine, ample rest, and moderate exercise in a tranquil, rural setting. The Pemberton Plantation was in so many respects the *ne plus ultra* location for a naval hospital, or as it turns out, a naval asylum.

Not long after the occupation of the Pemberton residence as a hospital, the government determined to erect the naval asylum somewhere near Philadelphia as per the 1811 legislation. According to Stockton:

as the Abbott lot was already purchased, and the old mansion occupied, it was determined to purchase another lot on which to erect the asylum proper. This intention, it is urged, shows conclusively that it was not originally designed to connect the asylum with the hospital, though they were both provided for by the same act of Congress. An adjoining property on Gray's Ferry road was selected.⁷⁴

The grounds of the Naval Asylum were not the result of a single property transaction, rather they were an amalgamation, resulting from several different acquisitions for distinct, but related purposes.

The Navy chose Philadelphia as the location of the asylum for several reasons. First, in terms of its general situation, Philadelphia, located near the midpoint of the eastern seaboard roughly equidistant between the capital city and New York, Philadelphia's great nineteenth century rival. This seaport city was also the headquarters of several important governmental institutions and installations, including one of the Navy's more significant shipyards. Philadelphia, itself once capital of the nascent country, was moreover a sophisticated urban center. According to Norman Johnston, Kenneth Finkel, and Jeffrey A. Cohen, authors of

⁷²Barton, *Treatise*, 27.

⁷³Augustus Kollner, U. S. Naval Asylum (1847). Watercolor. Library Company of Philadelphia.; *See Part II. D. 1. Historic Landscape Design.*

⁷⁴"The United State Asylum – A Sketch of its Early History, and Description of the Institution as it Stands To-Day," Unidentified Newspaper Clipping, 8 Aug. 1880. Castener Scrapbook, 53. Free Library of Philadelphia.

Eastern State Penitentiary: Crucible of Good Intentions (1994), “by the end of the 1820s, Philadelphia had been remade into the largest, most economically secure, most socially responsible, and most culturally exciting city in the United States.”⁷⁵

Initially settled by Quakers, Philadelphia was known for its peculiarly strong tradition of philanthropy, charity, and social consciousness. It was no mere happenstance that so many of the country’s most progressive insane asylums, cutting-edge prisons, and other vanguard social institutions were founded in and around Philadelphia. As Johnston, Finkel, and Cohen note: “the sharply rising population led to a boom in institutional construction. In fresh air, on open and affordable land surrounding an ever-expanding city core, grew an array of new philanthropic, penal, educational, and medical facilities.”⁷⁶ Such institutions included: the Friends Asylum near Frankford, the Orphan Asylum at Eighteenth and Cherry streets, the Pennsylvania Institution for the Deaf and Dumb at Broad and Pine streets, and, on the outskirts of the city the House of Refuge, Girard College for Orphans, the Pennsylvania Hospital for the Insane, the Alms House, Moyamensing Prison, and Eastern State Penitentiary. In light of the Quaker religion’s concern for human suffering, it should come as no surprise that Philadelphia became an epicenter for the establishment of pioneering institutions for care of the aged, infirm, indigent, and insane.⁷⁷ Given such a liberal, forward-thinking environment, an asylum for retired naval personnel would not only be accepted, but welcome.

In addition to the city’s long history of reformist social institutions, it also had an illustrious medical tradition. Because several almshouses established in Philadelphia during the first half of the eighteenth century provided medical care for their sick and insane inmates, they are considered by some to be the first hospitals in the American colonies.⁷⁸ Established in 1755, the Pennsylvania Hospital, a private institution for the care of the ill and mentally ill, was among the earliest formal hospitals in the colonies.⁷⁹ Likewise, Philadelphia was also home to the first American medical school—the College of Philadelphia, an antecedent to the University of Pennsylvania.⁸⁰ In addition to being a nationally and internationally recognized center of medical care and education, Philadelphia also possessed what was viewed a salubrious, relatively temperate climate. According to an 1833 *Saturday Evening Post* article:

the bills of mortality will show that Philadelphia is one of the healthiest cities in the United States. Invalids who are sent from different parts of our extended sea-board to this establishment, will be alike exempted from

⁷⁵Norman Johnston, Kenneth Finkel and Jeffrey A. Cohen, *Eastern State Penitentiary: Crucible of Good Intentions* (Philadelphia: Philadelphia Museum of Art, 1994), 10.

⁷⁶*Ibid.*, 12-13.

⁷⁷Evan H. Turner, Whitfield J. Bell, Jr., Charles Coleman Sellers and George B. Tatum, *The Art of Philadelphia Medicine* (Philadelphia: Philadelphia Museum of Art, 1965), 103.

⁷⁸*Ibid.*

⁷⁹*Ibid.*, 108.

⁸⁰*Ibid.*

the harsh breezes which assail the northern cities during the winter, as well as the severe bilious fevers which prevail during the summer and autumn to the South.⁸¹

Given the various geographic and cultural advantages, there was no other locale with more to offer Navy for the establishment of its flagship naval asylum than Philadelphia, and more particularly the Pemberton Plantation.

The Selection of the Architect

With an ideal site secured the government turned to the selection of a suitable architect to design what would be its only naval asylum. Several notable architects received invitations to submit designs as part of a limited design competition.⁸² Four architects, including one from Boston and three from Philadelphia, presented plans.⁸³ As stated in a report before Congress on January 15, 1827, the Commissioners of Naval Hospitals:

procured, with great care, from some of the most accomplished architects in our country, plans for the buildings which they suppose necessary at the places mentioned, keeping in view the improvements in such establishments in other countries, and the direction of the law 'to regard economy, and give preference to such plans as, with most convenience and least cost, will admit of subsequent additions, as the funds will permit and circumstances require.'⁸⁴

While the identities of three of the four architects are not verifiably known, Strickland, obviously, was awarded the Asylum commission as well as one in 1828 for the Naval Hospital in Pensacola, Florida.⁸⁵ As John Haviland, architect of Eastern State Penitentiary, received the commission for designing the Naval Hospital in Norfolk, Virginia and lived in Philadelphia, he was likely one of the other submitting architects. Regardless, Haviland still played a role, if a minor one, in the erection of the Naval Asylum in that he was called on by the government to report on the progress of the construction on various occasions. Knowledge and speculation as to the other architects, while interesting, is moot given that the Commissioners "selected the good features of each [submitted plan], and requested Mr. William Strickland, the distinguished architect of Philadelphia, to combine them."⁸⁶ The final design, then, may have been influenced by concepts offered by any one of the other architect-submitters, yet is ultimately attributed to Strickland.

⁸¹"United States Naval Asylum, near Philadelphia," *Saturday Evening Post* 5 Jan. 1833: 1.

⁸²Interestingly enough, neither Agnes Addison Gilchrist, author of the definitive Strickland biography, nor other historians who have written about the Naval Asylum make mention of this competition.

⁸³"United States Naval Asylum, near Philadelphia," *Saturday Evening Post* 5 Jan. 1833: 1.

⁸⁴"Navy Hospitals. Report of the Commissioners of Naval Hospitals upon the State of Their Funds."

⁸⁵Gilchrist indicates that Strickland collaborated on a design for the hospital. Quoting a letter from Dr. T. B. Salter dated March 22, 1828, she recounts, " 'I send by this day's mail a plan for a Hospital at Pensacola, which I think is best suited for that place. The design is my own; the draft was by Mr. Strickland, and is executed in a way sufficient plain, to render further explanations unnecessary. The main building, as is shown, is intended for 180 patients. A building at one end with apartments for 20 officers, will constitute the number of 200. On the other end, a corresponding building will be necessary for a Medical officer. A kitchen in the rear.' " Gilchrist, 76-77.

⁸⁶"United States Naval Asylum, near Philadelphia," *Saturday Evening Post* 5 Jan. 1833: 1.

George Strickland, William's younger brother, certainly asserted that this was the case. Like William, George had studied drawing, painting and engraving. When William sailed for Great Britain in 1825, George placed a notice in the *National Gazette and Literary Register* that read: "George Strickland respectfully informs the public that, in the absence of Mr. William Strickland, Architectural Designs, Plans and Drafts for Workman, Machinery, &c., will be executed at his office, No. 14, Library street, opposite the Bank of the United States."⁸⁷ This is perhaps the earliest reference to his career, albeit a short-lived one, as an architect. Records indicate that George unsuccessfully submitted designs for both the Naval Asylum and the Girard College competitions. Ultimately, he accepted a teaching position at the architectural school affiliated with The Carpenter's Company, and also taught at the Franklin Institute, before leaving Philadelphia for Washington, D.C. in 1834 to work as a clerk in the U. S. Patent Office.⁸⁸ George's brief architectural career remained largely fruitless.

Correspondence to and from the younger Strickland in 1826, the year after he placed his notice in the paper, indicated that he knew of plans for erecting an asylum in Philadelphia, but did not know the building program's specifics. This underscores evidence supporting only a limited competition for the structure. George Strickland may have even learned of the plans to construct the facility from his brother. On July 6, 1826, he wrote to the Secretary of the Treasury:

Having understood that a Marine Hospital is about to be erected in the vicinity of Philadelphia by the United States government...I am desirous of presenting drawings, but not knowing the site or situation of the lot, the sum proposed for its construction, or the probable number of invalids it is intended to accommodate, I would request as a favor what information you can conveniently give me on the subject.⁸⁹

In any event, unsolicited, George Strickland submitted plans to the Board of Naval Commissioners, although he initially sent them to the wrong address, further evidence that he was not well informed of the competition protocol.⁹⁰ When his elder brother was awarded the first premium, George Strickland complained that his brother had stolen some of his ideas. He asserted:

I find it an unpleasant duty to address you again on the subject of the designs for the Marine Hospital, the Board having come to a conclusion on that subject as I understand a union or incorporation of my plans with my Brother's and his appointment as superintendent. The effect of this decision I hope will not prevent my name appearing before the public as having contributed toward the drawings finally approved of. In the leading features I strongly recognize my plan and elevation and as my support and future success depend entirely

⁸⁷"Philadelphia Architects and Buildings," <www.philadelphiabuildings.org/pab>.

⁸⁸*Ibid.*

⁸⁹George Strickland. Letter to Samuel S. Southard, Secretary of the Navy. 6 July 1826. Record Group 45, Box No. 551. NARA.

⁹⁰George Strickland. Letter to Captain Charles Morris, President of the Navy Board. 21 Sept. 1826. Record Group 45, Box No. 551. NARA.

on my own exertions I trust the request I make will not be considered unreasonable, should this be deemed worthy of your consideration and respect, its favorable reception will by gratefully acknowledged.⁹¹

The final plans may truly have incorporated some design elements from the other architects, including George Strickland, however, the nature and extent of such “collaboration” is unclear. Nevertheless, as realized, the design of the building, with its simple geometries, graceful proportions and classical detailing, bears the distinct mark of its chosen architect and engineer, William Strickland.

The Design of the U. S. Naval Asylum

As this was the first asylum erected in the United States, Strickland was more or less free to formulate its design independent of any established precedent or code. By order of Congress, his instructions were to “regard economy, and give preference to such plans as, with most convenience and least cost, will admit of subsequent additions, as the funds will permit, and circumstances require.”⁹² Strickland took his orders seriously and at least attempted to keep costs in line and allow for the possibility of future additions. For instance, in order to reduce expenses and make it possible for a planned later addition at the rear of the building, Strickland intended the west elevation to be roughcast, rather than faced in Pennsylvania granite and marble like the other elevations. Funds were found, however, which allowed him to execute the riverside elevation in the same, rich materials as the others. Strickland wrote in 1829 to the Commissioners of the Naval Hospitals, noting:

In the original plan of the work two additional wings, together with a projection of the central building toward the river Schuylkill were contemplated and this front was to have been left in a rough state in order that the whole plan might be enlarged and finished at some future day. The wings of the principal front in the rear of the Piazzas were to have been rough-casted. The estimated cost of the building at that time did not provide for a finished back front on the River, and during the progress of the work it was deemed advisable with the approbation of the President and Secretary of the Navy to finish these most prominent and imposing features of the building with granite and marble. It very rarely happens in the construction of public works of this kind that some excess beyond the estimated cost does not take place; in this case it is owing essentially to a strong desire to produce not only durability, but a suitable and defined architectural finish.⁹³

Not only in his capacity as architect, but also in his capacity as superintendent of construction, Strickland attempted to keep costs down. He even prided himself on personally negotiating labor and supply contracts below market rates.⁹⁴ Strickland thus tried to design an efficient, flexible building plan and execute it in a fiscally responsible manner.

⁹¹George Strickland. Letter to Samuel S. Southard, Secretary of the Navy. 11 Jan. 1827. Record Group 45, Box No. 551. NARA.

⁹²Act Establishing Navy Hospitals, approved February 26, 1811, Sec. 3. Barton, *A Statutory History*, 18.

⁹³William Strickland. Letter to John Branch, John Eaton and Samuel D. Ingham, Commissioners of the Naval Hospitals. 16 Apr. 1829. Record Group 45, Box No. 551. NARA.

⁹⁴See Part I-A-4, “builder, contractor, suppliers.”

Nevertheless, Strickland held grand plans for this building and, perhaps more than anything else, wished it to be at once aesthetically pleasing and highly functional. Strickland, like his patrons, desired an imposing edifice worthy of the aspiring young country. Both Strickland and the Board of Navy Commissioners looked to Europe for models, namely the Royal Hospital for Seamen at Greenwich in England and Les Invalides in France. Begun in 1694 with work continuing until 1807, Greenwich Hospital was intended to house “wounded and worn out seamen.” With Sir Christopher Wren appointed Surveyor of Works by King William and Queen Mary, Greenwich was designed in a grandiose scheme of symmetrical blocks to which additions were repeatedly made. A few years earlier, in 1670, Louis XIV founded Les Invalides for the care and treatment of retired and invalid soldiers. Heretofore such soldiers had been cared for in convent hospitals, though in actuality many were reduced to beggary. With funds raised from a levy on soldiers’ pay, construction began in 1671 and lasted for five years on this massive, classically-derived edifice designed by Liberal Bruant, capable of housing nearly 4,000 men. Little wonder, then, that in designing an asylum for its veterans, the U. S. government looked to Europe for models of how to fund and construct such an institution. While Strickland and the Board of Navy Commissioners naturally drew inspiration from such venerable institutions, there was nonetheless the sense that Biddle Hall must be uniquely and representatively American.

Strickland thus chose to design Biddle Hall in an austere, Greek Revival idiom, as opposed to the exuberantly ornamented neoclassicism of Greenwich and Les Invalides. Not only was the Greek Revival a favorite of Strickland’s, it was quickly becoming the first truly national mode of expression for the young republic. By choosing a more focused, specifically Greek approach rather than the more interpretive Greco-Roman classicism, Strickland saw clear associations between the young American republic and both the democracy of ancient Greece as well as that country’s more recent struggle for independence from the Ottoman Empire. William Pierson, author of *American Buildings and Their Architect: The Colonial and Neoclassical Styles* (1970) asserts: “the Greek Revival was the first pervasive and self-conscious nationalistic movement in American architecture...Its appropriateness for government and public buildings was understood by architect and patron alike.”⁹⁵ Strickland, in fact, may be considered the first American architect to design in a pure, more-or-less “archaeologically correct,” Greek Revival mode. Strickland’s Second Bank of the United States, whose principal facades were modeled on the Parthenon in Athens, was the first American building whose proportions and decorative scheme were based fully on Greek models.⁹⁶ For a variety of reasons, then, Greek Revival was selected as the most appropriate expression for the U. S. Naval Asylum.

Although aesthetics were of great importance to Strickland “the architect,” functionality was of equal significance to Strickland “the engineer.” While he wanted to build a well-proportioned and imposing edifice, he also wanted this asylum-hospital to be salubrious and safe. To this end, he prioritized the admittance of sunlight and the circulation of fresh air throughout the building. During the nineteenth century, ample sunshine and proper

⁹⁵Pierson, 432- 436.

⁹⁶Ibid., 434.

ventilation were considered essential for maintaining and promoting the health and well being of the aged and afflicted. Although somewhat at odds with the classical appearance of the building, Strickland constructed long verandahs along the residential wings of the Asylum. The beneficiaries enjoyed free use of these verandahs, which allowed them to be outdoors without having to descend from the building should they be too infirm or ill to do so. Furthermore, each pensioner was assigned a private bedchamber with a view across the open verandahs to the beautifully landscaped grounds. Whether or not Harris encouraged Strickland to devise such a sensitive design in order to take full advantage of the therapeutic benefits of the landscape is unclear. What is certain, however, is that from the very beginning of the design process, emphasis was placed on light and fresh air.

Strickland ensured that the Asylum was bright and airy, illuminating and ventilating it with numerous large windows and a sophisticated array of skylights, light monitors, even a lantern and oculus. He carefully aligned graciously proportioned windows along the residential wings in such a way as to allow for direct cross-ventilation. Moreover, he devised a complex and unusual system of skylights and light monitors to admit light to the interior through the roof. Perhaps the most interesting skylights, likely original to the building, are those described by the structural engineering firm of Keast & Hood as “architecturally unique ‘nautical prows,’ which were bay windows terminating the third-floor corridors and monitors, modeled after the stern castles of wood fighting ships.”⁹⁷ In addition to the windows and skylights, which bring in light and fresh air from outside the building, there are also numerous windows within the building which convey borrowed light from one space to the next and promote the circulation of air through the halls of the residential wings. From the very beginning, Strickland insisted that the residential wings be amply lit and properly ventilated for the health and pleasure of the beneficiaries. Windows, skylights, light monitors, and long verandahs were all designed to promote the circulation of fresh air and cross breezes through the halls of the building.

In carefully and sensitively designing a salubrious environment for the pensioners, Strickland also endeavored to make their refuge, their asylum, as safe and secure as possible. Pushing his architectural and engineering skills to new limits, Strickland used innovative materials and techniques to create one of the nation’s first fireproof structures. Although fireproof construction was more expensive, labor intensive, time consuming, and complex than traditional construction, it was considered necessary for a residential structure of this kind, which would house occupants who might not be able to escape quickly in the event of an emergency.⁹⁸ To render this structure fire resistant, Strickland limited the use of flammable materials. He called for 2’-0” thick brick and stone masonry construction. Indeed, not only are the exterior masonry walls load bearing, but also many of the interior walls. In fact, the interior bearing walls are regularly spaced every 16’-0” throughout the wings.⁹⁹ Strickland employed several different types of vaulting throughout the building, including: barrel vaults in the corridors, groin vaults in the rooms, and an ovoid dome in the rotunda with the

⁹⁷Keast & Hood Co., *United States Naval Home: Report of the Conditional Assessment and Restoration Recommendations* (25 Feb. 2003): 9.

⁹⁸Sara E. Wermiel, *The Fireproof Building: Technology and Public Safety in the Nineteenth-Century American City* (Baltimore: The Johns Hopkins University Press, 2000), 23.

⁹⁹Keast & Hood Co., 8.

supportive pendentives springing from the floor.¹⁰⁰ These brick and stone masonry vaults are faced with layers of fireproofing plaster, which in some instances took many months to harden, even with furnaces well stoked for the purpose of accelerating the drying process.¹⁰¹ While the first and second floors are constructed on masonry vaults, what was originally a garret is supported by wood joists. Likewise, the roof structure is timber framed. Interestingly, the roof itself is partially supported by the piers and cast-iron columns of the verandahs, which are in turn stabilized by the weight of the roof. This mutually dependent, highly sophisticated structural system is a testament to Strickland's abilities as both an architect and engineer.

In addition to creatively using masonry load-bearing construction and vaulting to create a fire resistant structure, Strickland also used cast and wrought iron in the construction of the verandahs. Strickland surely chose to use these materials not only for their novel, unexplored aesthetic qualities, but also for their fireproof properties.¹⁰² Consequently, this is one of the very first buildings constructed with structural cast iron in the United States. Margot and Carol Gayle, co-authors of *Cast-Iron Architecture in America: The Significance of James Bogardus* (1998), assert that "by the 1820s builders were following the British practice of using cast-iron columns as weight-bearing members inside buildings... William Strickland... resident of the iron-producing state of Pennsylvania, pioneered such construction when he rebuilt Philadelphia's burned-out Chestnut Street Theatre between 1820 and 1822, using cast-iron columns."¹⁰³ As the use of cast iron was virtually unheard of at this time in America, Strickland based his designs for the verandah railings and columns on examples he had seen abroad. According to the *U. S. Naval Home Reuse Study* (1980), prepared for the City of Philadelphia and the Pennsylvania Historical and Museum Commission, Strickland "traveled in England during 1825 and most certainly saw cast-iron building components in use in the cities of Bristol, Birmingham, and Liverpool."¹⁰⁴ Hence his choice of terminology for the verandahs: "piazzas," a term in common parlance in Great Britain.¹⁰⁵ Unafraid of using experimental construction techniques and innovative materials, Strickland thus created a remarkable building, at once visually striking, utilitarian, salubrious, and comparatively safe.

¹⁰⁰Gilchrist, 76.

¹⁰¹"There is required at the United States Naval Asylum for the purpose of drying the walls of said building 8 tons of coal to be used in the furnaces put up last season, the coal got last time being all expended," wrote the Superintendent of the Asylum, James McClure, in 1830. James McClure, Superintendent of the Naval Asylum. Letter to George Harrison, Navy Agent. 10 Sept. 1830. Record Group 45, Box No. 551. NARA.

¹⁰²Strickland "installed iron instead of wood in balconies and stairways in several other projects in the late 1820s through the early 1830s: three mints for the Treasury Department and an almshouse for Blockley Township in Pennsylvania, all fireproof," notes Wermiel. Wermiel, 23.

¹⁰³Margot and Carol Gayle, *Cast-Iron Architecture in America: The Significance of James Bogardus* (New York: W. W. Norton & Company, 1998), 35.

¹⁰⁴Roberts et al., 17.

¹⁰⁵Virginia and Lee McAlester, *A Field Guide to American Houses* (New York: Alfred A. Knopf, 1998),

The Evolution of the U. S. Naval Asylum

William Strickland involved himself fully in all aspects of the creation of the U. S. Naval Asylum. Not only did he thoughtfully and sensitively design Biddle Hall to meet the needs of the beneficiaries and hospital patients it was to serve, he also supervised its construction, personally negotiated labor and supply contracts, landscaped its grounds, and consulted on later alteration and repair work.¹⁰⁶ From the groundbreaking for the cellars of Biddle Hall in the autumn of 1826 until the winter of 1829, Strickland closely involved himself in the construction process and personally oversaw the realization of his plans. Progress on Biddle Hall, however, was slower than anticipated due to difficulties in securing the necessary monies from the Naval Hospital Fund. As of 1832, when the powers of the Commissioners of the Naval Hospitals were transferred to the Secretary of the Navy, appropriations were to come from Congress, but again it was only with difficulty that funds were secured. In April 1829 Strickland estimated that the building would be ready for occupancy within six weeks, however various financial woes continued to retard progress.¹⁰⁷ For example, a month earlier Strickland implored the Secretary of the Navy, "it is now four months since the workmen engaged at the building of the United States Naval Asylum have received their wages. The importunities of 100 men induce me again to request that you may be pleased to direct me a remittance of 20,000 dollars for the purposes thereof and for the further progress of the building."¹⁰⁸ Construction did not fully resume and was at such a standstill by winter that the partially finished building was shuttered, construction equipment locked away, and a superintendent, James McClure, hired to guard the premises.¹⁰⁹ Despite these and other problems, progress—albeit slow and fitful—was made and on December 3, 1833 the building, costing approximately \$220,000, was formally dedicated.¹¹⁰ Although dedicated, the building was not entirely finished—interior work on the upper floors remained unfinished—however it was sufficiently in order for two beneficiaries, Daniel Kleis and William Williams, to move into their new quarters in Biddle Hall, along with the fifteen hospital patients who had been residing in the former Pemberton mansion.¹¹¹ The Naval Asylum, under the command of Lieutenant James B. Cooper, and the Philadelphia Naval Hospital, under the direction of Bradford, finally had the accommodations, staff, and wherewithal to properly care for the veterans and wounded of the Navy and Marines.

As is the case with most newly-formed institutions, the first few years presented numerous challenges. Commodore James Barron, in command of the nearby Philadelphia Navy Yard, had jurisdiction over the Asylum and Hospital, but took little interest in the goings-on at Biddle Hall. Moreover, Lieutenant Cooper proved unable to run the Asylum in an efficient and competent manner. In 1838, Secretary of the Navy James K. Paulding asked the

¹⁰⁶See Part I-A-2, "architect."

¹⁰⁷William Strickland. Letter to John Branch, John H. Eaton, Samuel D. Ingham, Commissioners of the Naval Hospitals. 18 Apr. 1829. Record Group 45, Box No. 551. NARA.

¹⁰⁸William Strickland. Letter to John Branch, Secretary of the Navy. 30 Mar. 1829. Record Group 45, Box No. 551. NARA.

¹⁰⁹Commodore William Bainbridge. Letter to the Commissioners of the Naval Hospitals. 16 Dec. 1829. Record Group 45, Box No. 205. NARA.; For information on James McClure, see Part I-A-4, "builder, contractor, suppliers."

¹¹⁰While substantial, this sum was supposedly less than that required to build and fit out a frigate. "United States Naval Asylum, near Philadelphia," *Saturday Evening Pos* 5 Jan. 1833: 1.

¹¹¹Hooker, 33-34.

charismatic Commodore James Biddle to step in and take control of the Asylum under the title of Governor.¹¹² Under his capable leadership, administrative procedures were established, Biddle Hall was completed, the grounds were improved, the old Pemberton residence was raised, and water from the Schuylkill River was introduced.¹¹³ The Asylum was on its way to becoming the well-run and well-respected institution the government had always hoped it would be.

Biddle Hall, however, housed not one, but three separate institutions at this time. In addition to the Naval Asylum and the Naval Hospital, it was also home to the first U. S. naval academy between 1839 and 1845. Previously, informal training had been offered at the naval yards in Boston, Massachusetts, Norfolk, Virginia, and Brooklyn, New York. On November 25, 1839, eleven midshipmen reported to Biddle Hall for instruction in mathematics, French, Spanish, writing, drawing, naval gunnery and tactics, astronomy, naval history, navigation, surveying, mechanics, and maritime law.¹¹⁴ The midshipmen and their professors initially lived and studied on the building's ground floor, though they found it to be "damp, cold, cheerless and unhealthy" and soon moved to new quarters on the first floor.¹¹⁵ As the school grew, conditions became crowded and the administration had no choice but to allow some students to live off-grounds. Maintaining order and discipline was difficult, as most of the midshipmen were grown men with several years experience before the mast. At one point, the midshipmen even hung Barton, head of the Hospital, in effigy. A. H. Foot recounted in 1843:

I was informed by John Salmon, one of the laborers, that a stuffed figure was hanging at the head of the flagstaff. I directed him to haul it down and on examination, found the words 'Medical bureau,' written on the flap of the pantaloons...I am induced to believe, from the unusual number of persons passing in and out of the midshipmen's apartments together with the opening and shutting of their windows 'after hours' that the figure was prepared and run up by some of the young gentlemen.¹¹⁶

According to Governor Charles W. Morgan, "at least one half of these [forty-six] young officers have become involved in debt, have contracted habits of idleness, perhaps of immorality, and finally incurred the mortification of failure before the Board of Examiners."¹¹⁷ Morgan consequently recommended that the Academy be disbanded and the

¹¹²Paulding. Letter to Commodore Chauncey, President of the Navy Board. 15 Aug. 1838. Record Group 45, Letters to the Board of Navy Commissioners, Vol. 1, PC 30, Entry 8. NARA.

¹¹³The Pemberton mansion was raised in ca. 1835.

¹¹⁴Governor William W. McKean. Letter to Lewis Warrington, Chief of the Bureau of Yards and Docks. 13 Jan. 1844. Record Group 24-1-1.1, Correspondence with Naval and Federal Officials, Vol. 2. Mid-Atlantic NARA.

¹¹⁵Hooker, 47.

¹¹⁶A. H. Foot. Letter to Governor William W. McKean. 15 Mar. 1843. Record Group 24-1-1.1, Correspondence with Naval and Federal Officials, Vol. 2. Mid-Atlantic NARA.

¹¹⁷Governor Charles W. Morgan. Letter to John Mason, Secretary of the Navy. 25 May 1844. Record Group 24-1-1.1, Correspondence with Naval and Federal Officials, Vol. 2. Mid-Atlantic NARA.

midshipmen sent to a “school ship” or other remote location. The problems continued and on October 10, 1845, Secretary of the Navy Bancroft officially closed the school, transferring its sixty-five midshipmen to new facilities in Annapolis, Maryland.

Biddle Hall once again housed only the Asylum and the Hospital, but divisions existed between the two institutions. It no longer seemed possible for the two administrations to coexist peacefully beneath the same roof, however funds were unavailable at the time for the erection of a second edifice. As a solution in 1842, Secretary of the Navy Abel P. Upshur called upon Strickland to divide Biddle Hall down the middle with a lath and plaster partition. As the floor plan is virtually symmetrical, dividing the building in two provided a fairly easy and equitable, if somewhat childish, solution to the problem. The north wing became the Asylum wing, while the south wing was devoted to the needs of the Hospital. A year and a half later, however, the administration realized that the partition was truly unnecessary and summarily removed it. As Governor William W. McKean stated: “in relation to the partition walls I can only say that I am not aware of one good end gained by their erection, whilst on the other hand they disfigure and darken the building, prevent a free circulation of air, and make it more difficult to keep clean.”¹¹⁸ At the time the partition was removed, the institution was placed under the sole command of the Governor.¹¹⁹

Perhaps to appease the Hospital administration, Strickland was called upon at this time to design virtually identical residences for the Governor and the Surgeon General.¹²⁰ Indeed, such great pains were taken to ensure that they would be of equal stature that an earthen mound was constructed upon which to build the Surgeon General’s Residence.¹²¹ Strickland designed these villa residences within the Greek Revival mode making them compatible with the design of Biddle Hall. Erected between 1844 and 1848, the residences elevated the site to the status of a true complex. The concept and image of the Asylum as an imposing complex were reinforced by the brick, stone, and cast-iron boundary wall/fence and the three Greek Revival gatehouses erected between 1844 and 1845.¹²² Strickland’s Asylum thus emerged as one of the most impressive, visually and architecturally unified complexes of its day.

By 1849 jurisdiction over the Naval Asylum was transferred to the Bureau of Yards and Docks, while the Naval Hospital remained under the Bureau of Medicine and Surgery. In 1858 Congress appropriated funds for the first time to support beneficiaries previously cared for with monies from the Naval Hospital Fund.¹²³ Congress even appropriated \$75,000 for the construction of a new building in 1864. Although ca. 1846 the attic was transformed into a habitable third story, by the time of the Civil War, Biddle Hall had become uncomfortably crowded. As the Civil War only increased the numbers of both beneficiaries

¹¹⁸Governor William W. McKean. Letter to David Henshaw, Secretary of the Navy. 25 Sept. 1843. Record Group 24-1-1.1, Correspondence with Naval and Federal Officials, Vol. 1. Mid-Atlantic NARA.

¹¹⁹Governor Charles W. Morgan. Letter to George Bancroft, Secretary of the Navy. 14 Mar. 1845. Record Group 24-1-1.1, Correspondence with Naval and Federal Officials, Vol. 2. Mid-Atlantic NARA.

¹²⁰See Part II-D-2, “other significant structures on the site.”

¹²¹Governor Charles W. Morgan. Letter to John Y. Mason, Secretary of the Navy. 8 Aug. 1844. Record Group 24-1-1.1, Correspondence with Naval and Federal Officials, Vol. 2. Mid-Atlantic NARA.

¹²²See Part II-D-1, “historic landscape design.”

¹²³Roberts et al., 12.

and hospital patients, it was decided to erect a new building, located approximately 400' to the rear of Biddle Hall, exclusively devoted to the specialized needs of the Hospital. John McArthur, Jr. (1823–1890) was selected as the architect and designed Laning Hall, as it came to be known, in the French Second Empire mode he helped to popularize in the Philadelphia area. The completion of this building in 1868 allowed for greater separation between the two institutions, although they still occupied the same grounds.

In 1889 the U. S. Naval Asylum changed its name to the U. S. Naval Home. In 1898 the institution's administration was transferred to the Bureau of Navigation, although the buildings and grounds remained under the jurisdiction of the Bureau of Yards and Docks. Then, in 1921, the Naval Hospital was transferred to the Philadelphia Navy Yard, while Laning Hall came under the purview of the Public Health Service, which operated it as a Veteran's Hospital until 1933. At this time, Laning Hall reverted to Naval control and was renovated in 1938 by the Works Progress Administration as additional housing for beneficiaries. The Hospital, however, was not the only institution undergoing a transformation. Ten women, for instance, were admitted as Asylum pensioners in 1968.¹²⁴ Such changes in the administration of both the Hospital and Asylum were accompanied by an evolution of the physical appearance of the complex. For instance, numerous outbuildings, primarily service and storage facilities, were constructed on the premises at this time, until by 1975 there were nearly forty-three such structures dotting the grounds.¹²⁵

The world was thus changing both within and without the protective walls of the Asylum. The surrounding area, for instance, was no longer the bucolic refuge – tranquil and salubrious – it once was. Over the years, the city encroached upon and encircled the Asylum. City streets and train tracks cut across land which once belonged to the Asylum, divorcing it from the Schuylkill River. Seedy grog shops sprang up around the Asylum which catered to the old sailors.¹²⁶ Neighboring factories, such as a carbolic acid manufactory, produced so much pollution that the mortar holding the south wall together began disintegrating as early as 1872.¹²⁷ An 1887 sanitary report noted: “one of the wharves within 200 yards of the hospital is always covered with an immense accumulation of manure and fertilizers, probably 500 tons or more and when the wind is from that direction, a stench pervades the entire grounds ... which is nearly intolerable.”¹²⁸ In 1903 Governor C. E. Clark lamented: “the fall of soot in the City, owing to the prevalent use of soft coal by many of the factories surrounding our grounds, has caused a great deal of trouble in the past, and only a slight increase of it which is anticipated by the building of additional factories in the neighborhood, would make the use of the lawn for [laundry] drying purposes almost

¹²⁴Katherine Dunlap, “Aye Maties! The Female Fleet is In,” *Philadelphia Inquirer* 27 Nov. 1968: 21.

¹²⁵See Part II-D-3, “outbuildings.”

¹²⁶Rear Admiral William Mullany. Report to the Bureau of Yards and Docks. 31 July 1879. Record Group 71-1-3.1. NARA.

¹²⁷Hooker, 128.

¹²⁸W. T. Hord, Medical Director, USN. “US Naval Hospital, Philadelphia, PA, Feb 1st, 1887 Sanitary Report.” Record Group 71-1-3.1. Mid-Atlantic NARA.

impossible.”¹²⁹ By the 1930s, automobiles were being broken into and stripped, even when parked on the grounds.¹³⁰ No wonder, then, that the surrounding neighborhood came to be known as “Devil’s Pocket.”

As the area continued to degenerate and deteriorate, various Governors discussed moving the Asylum to a location removed from the evils of the city. That is, a setting more like the idyllic one carefully selected by Harris in 1826 for the creation of the Naval Asylum. After years of debate, the Navy ultimately decided to abandon this site in 1976 for a high-rise facility designed to accommodate the anticipated influx of World War II veterans from the Navy, Marines, and Coast Guard. Largely against their wishes, the beneficiaries were transferred to this new and modern facility in Gulfport, Mississippi. Today, the historic, venerable site of the U. S. Naval Asylum is derelict and overgrown, the buildings disintegrating, the memories fading.

PART II: ARCHITECTURAL INFORMATION¹³¹

A. General Statement:

1. Architectural character:

A superb example of Greek Revival architecture in the United States, Biddle Hall stands two-and-a-half stories over a raised basement, and conveys its monumental presence largely through an octastyle portico executed in the Ionic order at the center of the east (principal) facade.¹³² A domed rotunda backs up to this feature on the west elevation. The central block is flanked by two wings bearing open verandahs with stone piers at ground level and decorative cast-iron columns on the first and second floors. The exterior is sheathed in ashlar-coursed granite and marble blocks.

From the east, the building still evokes a Greek temple raised on a slight prominence above the Schuylkill River, much like the Ionic temple on the Ilissus, used as point of inspiration for the design. Beneath the austere, classical exterior articulation lies an ingeniously planned, three-story masonry complex of groin-vaulted spaces which comprised the latest technologies in nineteenth-century fireproof institutional construction.

¹²⁹Governor C. E. Clark. Report to the Chief of the Bureau of Navigation. 18 July 1903. Record Group 45, Box No. 26. NARA.

¹³⁰General Correspondence. Record Group 24-1-1.8, Box No. 10. Mid-Atlantic NARA.

¹³¹Please note that the building description also includes historical information deemed relevant to the description of the building, its components, and present state.

¹³²The levels of the building include a basement or ground floor, a principal or first floor, and a second floor. After construction, a crawlspace and cellar were expanded below the building in ca. 1843, while the roof was raised and the attic transformed into a habitable third story ca. 1846 with the addition of dormers and a continuous light monitor, extending along the corridor. The levels of the building will be referred to throughout this report as the “cellar,” “ground floor,” “first floor,” “second floor,” and “third floor.” As for the different elevations and wings, they will be referred to by their directional coordinates, i.e. north, south, east and west.

2. Condition of fabric:

The condition of the Naval Asylum complex is poor, stemming from arson, vandalism, looting, environmental injury, and deferred maintenance; however, the building remains structurally sound with reasonably intact ground, first, and second floors. The third floor and roof remain in grave disrepair.

B. Description of Exterior:

1. Overall dimensions:

As originally conceived and constructed, Biddle Hall stood as a two-and-a-half story edifice over a raised basement with its exterior organized into thirty-three bays. The footprint measured approximately 385' x 135'.¹³³

2. Foundations:

Biddle Hall is a solid, fireproof structure with substantial, exterior and interior, masonry bearing walls. Strickland designed the exterior bearing walls to support great loads, ordering that they be constructed 2'-0" thick of brick and stone.¹³⁴ According to an 1846 letter from Commodore Charles W. Morgan, Governor of the Naval Asylum, to Secretary of the Navy George Bancroft, "the brick division walls, which commence as the foundation of the building, extend through the several stories up to the roof, preserving a uniform arrangement throughout."¹³⁵ These interior bearing walls are evenly spaced approximately 16' apart, buttressing the exterior walls and increasing the overall stability of the edifice.¹³⁶

Strickland called for a raised basement in part because the low areas of the Asylum property lay within the 100-year floodplain of the Schuylkill River and, even when the river is not overflowing its banks, a good portion of the land tends to be damp.¹³⁷ Stylistic and aesthetic considerations notwithstanding, a design that elevated the primary living and social spaces above the ground floor was naturally desirable. It was not until ca. 1843 that an extensive cellar was dug beneath the ground floor.¹³⁸

¹³³Webster, 187.; Carolyn Pitts, *National Register of Historic Places Inventory Nomination Form, United States Naval Asylum* (Washington, DC: National Park Service, 1975).

¹³⁴Keast & Hood Co., 8.

¹³⁵Governor Charles W. Morgan. Letter to George Bancroft, Secretary of the Navy. 23 Jan. 1846. Record Group 24-1-1.1, Correspondence with Naval and Federal Officials, Vol. 3, 55. Mid-Atlantic NARA.

¹³⁶Keast & Hood Co., 8.

¹³⁷Roberts et al., 34.

¹³⁸*Ibid.*, 19.

3. Walls:

Biddle Hall is a vaulted masonry building with substantial exterior and interior bearing walls. The facing of the raised basement is of lightly rusticated blocks of gray Pennsylvania granite laid in regular ashlar courses. The upper stories of the east, north, and south elevations are sheathed in ashlar courses of Pennsylvania marble. The walls on the building's west side are stucco over masonry scored to mimic courses of ashlar stone.¹³⁹

The open verandahs on the east and west sides are supported at the ground level by granite and marble piers, both freestanding and engaged. Bearing simple capitals and bases, the piers might be described as belonging to the Tuscan order. Their shafts and capitals appear to be carved from single blocks, while the bases' outer surfaces are composed of multiple pieces of granite.

4. Structural system, framing:

Strickland designed Biddle Hall as a fireproof structure, one of the earliest of its kind in the United States. To this end, he utilized masonry walls with a 2'-0" thickness and a variety of vaulting techniques. In addition to the load-bearing exterior walls, interior walls at regular intervals of 16' are also load bearing, with partition walls being framed, lathed, and plastered.¹⁴⁰ Several different types of vaulting are evident throughout the building, including: barrel vaults in the corridors, groin vaults, and an ovoid dome set on pendentives in the rotunda. These masonry vaults are faced with thick layers of fireproofing plaster.¹⁴¹

While the first- and second-story floor surfaces are laid directly on masonry vaults, the ground floor and what was originally a garret are partially supported by wood joists.¹⁴² A recent analysis of the third floor structure by the firm of Keast & Hood reveals the innovative, meticulous planning which went into the creation of the structural system and framing of this building, a building intended to stand the test of time. The structural engineers at Keast & Hood Co. note:

The attic floor construction is wood frame comprised of two layers. 1: The upper layer is comprised of long floor joists spanning north/south between the frame walls. Deep joists occur at the center line of the hallway and over each of the corridor walls below. Between these 3 deep joists (i.e. in the attic corridor) are two short spans of bridging joists running east/west. The attic floor boards change direction above the bridging joists in the corridor. 2. The lower layer is comprised of ceiling joists spanning east-west between the deep floor joists and the exterior bearing walls. The double layer construction is

¹³⁹Keast & Hood Co., 7.

¹⁴⁰Roberts et al., 70, for partition walls; Keast & Hood Co., 8, for load-bearing interior walls.

¹⁴¹See footnote 102.

¹⁴²Roberts et al., 70.

characteristic of William Strickland's extraordinary concern with quality and draftsmanship. The assembly was put together with subtle but important details intended to control plaster cracking in the second floor ceiling. All framing is constructed so as to isolate the floor joists carrying attic floor loads from the ceiling joists carrying the 2nd floor plaster ceiling. In most cases, the floor joists literally float above the ceiling joists with no direct attachment. Only the 3 deep floor joists indirectly support the ceiling structure. However the top surfaces of these deep joists are slightly recessed below the bridging joists which directly carry the floor in the central corridor. Also, the ceiling lath direction turns under the deep joists. These details are all intended to control plaster cracking. Another interesting aspect of the attic floor structure is that it is constructed entirely without the use of the pegged mortise and tenon joinery more typical of the period. The ceiling and bridging joists are supported on a pair of ledgers nailed to the sides of the deep joints. The bridging joists are notched to sit on an upper ledger, while the ceiling joists have a clever 'jaw'-type notch at their ends, which allowed these members to be pulled into position sideways along the lower ledger.¹⁴³

5. Portico, verandahs:

The most striking and outwardly visible architectural feature of Biddle Hall is the monumental, octastyle portico, set at the top of nineteen marble stairs flanked by massive stone platforms. The pediment is supported by fluted columns of the Ionic order, which are 3'-0" in diameter and carved from Pennsylvania marble.¹⁴⁴ The pediment and entablature are devoid of ornament, and convey the bold lines and geometries of the composite parts. Strickland drew direct inspiration for the portico from a plate depicting the Ionic temple on the Ilissus in James Stuart and Nicholas Revett's celebrated pattern book, *Antiquities of Athens* (1762).¹⁴⁵ The ceiling of the portico and gable roof behind the pediment are now missing.

The upward sweep of the stairs and the rising columns of the portico mark the central pavilion and create a sense of verticality. This feeling is balanced by a horizontal emphasis present in the wings and created by the long open verandahs fronted by open iron balustrades. The tension between the vertical and the horizontal on the east facade enlivens what might otherwise be an overly rigid elevation. The verandahs, or piazzas as Strickland referred to them, truly animate and provide depth for the otherwise plainly articulated, regularly fenestrated walls of the wings with their delicate forms.

Constructed of wood framed decking, the verandahs are supported on the ground level by square freestanding and engaged stone piers surmounted by iron columns on the first- and second-stories.¹⁴⁶ On each floor and wing, the verandah bays are defined by five slender cast-iron columns with delicately wrought fluted capitals. Within the bays are balustrades

¹⁴³Suzanne Pentz, "Keast & Hood Co. United States Naval Home Site Visit Memorandum" (20 May 2003) No. 7, 1-2.

¹⁴⁴Gilchrist, 76.

¹⁴⁵*Ibid.*

¹⁴⁶Gary Reuben, *Historic Preservation Certification Application: Description of Rehabilitation* (2 July 1985) np.

divided into two panels by scroll-like balusters. The wrought-iron balustrades are forged in a regular diamond pattern mirroring the lattice pattern in the iron fence delineating the front perimeter of the Asylum property.

6. Chimneys:

The roof of Biddle Hall is punctuated by numerous interior chimneys of varying sizes. All are located along the east and west slopes of the roof and are constructed of running bond brick stacks faced with coursed Pennsylvania marble above the roofline. They are articulated with a 1" to 2" wide continuous raised band running around the chimney several inches below the top. Most of the chimneys are not currently capped, although flat rectangular slabs of marble carried on six small shafts shelter the two largest chimneys flanking the portico on the east elevation. The chimneys service several fireplaces located throughout the building, most of which warmed the common spaces and the officer's quarters in the central block, and the sitting rooms in the terminating pavilions.

7. Openings:

a. Doorways and doors:

Biddle Hall was designed with a grand entrance. Upon mounting the monumental flight of steps leading to the portico, one enters the building thorough a starkly imposing, tripartite portal composed of paneled wood double doors flanked by narrow rectangular sidelights. The slightly recessed gray marble door surround is composed of a simple lintel with a carved drip mold and two plain framing jambs separating the door from the sidelights. This arrangement mirrors the design of the tripartite windows which Strickland used on the façades of the central and terminating pavilions.¹⁴⁷

The remaining exterior doors are less grandiose. The entry to the rotunda is a set of paneled wood double doors framed by rectangular sidelights and topped by an elliptical fanlight. The door surrounds for the verandah doors are plainly articulated. Many of the doors are currently fitted with screens and there are several clapboard vestibules, or "doghouses," on the west verandah. According to the Keast & Hood Co.: "vestibules at the reentrant corners to the privies were shown by the original architect, William Strickland, on the 1848 drawing; however, the existing vestibules are not in the same locations."¹⁴⁸ In 1953 metal fire doors were added to the building when cinderblock fire towers were constructed at the ends of the terminating pavilions on the west elevation.¹⁴⁹

¹⁴⁷See Part II-B-7a, "windows."

¹⁴⁸Pentz, No. 6, 3.

¹⁴⁹Roberts et al., 20.

b. Windows:

In order to relieve the severity of the building's long, smooth-faced exterior walls, Strickland punctuated them with regularly-spaced windows. The majority of these windows, those along the wings bringing light and fresh air to the pensioners' chambers, are wooden, six-over-six windows of graciously long proportions. The windows are slightly recessed into undecorated openings, though those on the west elevation have a plain, lower sill which protrudes slightly beyond the plane of the façade. Similar windows are symmetrically arranged on the central pavilion beneath the portico; two on either side of the main portal on the first floor and five along the second story.

In addition to these simple window openings, Strickland also incorporated tripartite windows into the overall design of the building; a window arrangement often seen in classically-inspired edifices of first half of the nineteenth-century. Aside from the monumental octastyle portico, these windows serve as the edifice's primary form of ornamentation. Strickland used the windows to accentuate the central and terminating pavilions, locating them on all three stories of the east and west elevations to either side of the portico and again on all three stories on the front, rear and sides of the pavilions at the ends of the wings. They consist of a large double-hung window flanked by narrow double-hung "sidelights." The lintel, sill, and jambs are slightly recessed from the façade and are rendered in unadorned stone. The lintel is topped by a carved drip mold and an unadorned sill projects from below the window and above the simple recessed stone panel below.¹⁵⁰

Other window types of varying epochs are present in the building including skylights, dormers, monitors, and an oculus in the dome, some part of Strickland's original conception and some added later. By 1840, the skylights over the main corridors were present.¹⁵¹ Third-floor dormers were added ca. 1846 when the roof was raised and the third floor was transformed from a storage space into habitable living quarters.¹⁵² Other skylights, such as those installed over the grand stairwells in 1929, were inserted over the years.¹⁵³ The extant window sash dates to 1923.

¹⁵⁰*Ibid.*, 18.

¹⁵¹Some, such as Keast & Hood, doubt that skylights featured in the original design of Biddle Hall. The documentary evidence seems to prove otherwise. For instance, in a July 29, 1840 letter to Commodore Chauncey, President of the Navy Board, Commodore Biddle, Governor of the Naval Asylum, wrote "The passages of our Center Building are lighted by means of a sky light in the roof. This sky light is quite large. It is badly arranged, in as much as it lays so flat, that the rain penetrates." Commodore Biddle, Governor of the Naval Asylum. Letter to Commodore Chauncey, President of the Navy Board. Record Group 24-1-1.1, Correspondence with Naval and Federal Officials, Vol. 1. Mid-Atlantic NARA; Two years later, in a November 10, 1842 letter to Secretary of the Navy, Abel P. Upshur, Strickland noted, "In the extreme southern end of the building or Hospital division there is a large room in the third story [read second story], fitted with a skylight in the ceiling, which room was originally intended for a surgical hall, and which may now at a moderate expense, be finished with the necessary fixtures for Medical and surgical purposes – say \$250.... The skylights on the roof are out of repair owing to the expansion and contraction of the metal gutters, as well as the capillary attraction of the water under the lap of the glass." Gilchrist, 99.

¹⁵²"Above the second story (the second above the basement) which is the highest now finished and occupied, there is another, presenting the same general appearance as those below, and affording about the same

8. **Roof:**

a. **Shape, covering:**

Strickland designed Biddle Hall with a gable roof over the portico to reinforce the temple-like appearance and verticality of the central pavilion. By contrast, he called for a lower hip-roof for the wings, providing an unobtrusive visual cap for these horizontal elements. Strickland thus subtly, masterfully, accentuated the tension between the central pavilion and the flanking wings, between the vertical and the horizontal. To further highlight this dissimilitude, again in an understated manner, Strickland selected a copper covering for the central pavilion and slate for the wings.

The roof structure is timber framed and partially supported by the external cast-iron columns on the verandahs, which are in turn stabilized by the weight of the roof. In order not to unduly stress the bearing walls, however, Strickland cleverly designed the roof with timber framing in such a way that its weight was not carried solely by the exterior bearing walls, but also by the cast-iron columns of the verandahs.¹⁵⁴

Over the years, several changes were made to the roof and roofline of Biddle Hall. In 1830 lightning rods were added to the roof to help maintain the “fireproof” nature of the edifice.¹⁵⁵ This was undoubtedly a sound idea, as the roof was timber-framed with substantial beams and scantling “of good sound white pine free from sap and wind shakes.”¹⁵⁶ In 1838 the cooper roof of the Blockley Alms House, designed by Strickland in 1830 and situated directly across the Schuylkill River from the Naval Asylum, blew off in a high wind.¹⁵⁷ That same year, the coppered section of the roof of Biddle Hall was carefully reinforced and refastened. Around 1846 the roof was raised and pedimented dormers and a continuous light monitor were added in order to transform what had previously been storage space into a habitable third floor for housing the ever-increasing number of pensioners.¹⁵⁸ Though the overall shape of the roof was unaltered, the appearance and proportions of the building were irrevocably changed. Between 1852 and 1853, the wings of the roof were retinned and approximately twelve thousand tons of “old sheet copper,” along with

amount of rooms. It is at present empty, and has heretofore been used as a mere garret depository for lumber and rubbish,” noted Governor Charles W. Morgan in 1846. Governor Charles W. Morgan. Letter to George Bancroft, Secretary of the Navy. 23 Jan. 1846. Record Group 24-1-1.1, Correspondence with Naval and Federal Officials, Vol. 3, 55. Mid-Atlantic NARA.

¹⁵³Keast & Hood Co., 7.

¹⁵⁴Suzanne Pentz, “Keast & Hood Co. United States Naval Home Site Visit Memorandum” (7 May 2003) No. 6, 3.

¹⁵⁵William Read for George B. Harrison, Navy Agent in Philadelphia. Letter to R. H. Bradford, Secretary of the Navy Hospital Fund. 11 Sept. 1830. Record Group 45, Box No. 551. NARA.

¹⁵⁶William Strickland. Letter to Lewis S. Coryell, Engineer, New Hope, Bucks County. 4 Jan. 1827. Coryell Papers. Historical Society of Pennsylvania.

¹⁵⁷Governor James Biddle. Letter to Commodore Chauncey, President of the Navy Board. 26 Oct. 1838. Record Group 24-1-1.1, Correspondence with Naval and Federal Officials, Vol. 1. Mid-Atlantic NARA.

¹⁵⁸See footnote 159.

one or two tons of cast and sheet iron, were sold by the pound.¹⁵⁹ The roof over the central pavilion was eventually replaced with zinc-coated copper in 1937.¹⁶⁰ Today the roof is entirely of red, standing seam metal, though it has been severely damaged in some sections due to arson.

b. Cornice, eaves:

Like the upper stories and portico, the cornice and eaves of Biddle Hall are executed in pale gray Pennsylvania marble. As for the design, the eave overhang is slight with an unadorned frieze beneath it, a typical classical revival treatment of the roof-wall junction. Indeed, the entire entablature is simply, almost austere rendered. With understated classical molding, the entablature creates a sleek, yet strong, visual cap for the facade. In terms of its construction, the entablature is cantilevered beneath the hip roof.¹⁶¹ That is, to counteract the outward projection of the cornice, ponderous, rough-hewn, marble slabs were placed along the rear ridge of the raking pediment where they would be hidden from view beneath the roofing material.¹⁶²

c. Dormers, lantern:

Around 1846 the roof of Biddle Hall was raised in order to expand the number of bedrooms in the institution.¹⁶³ To render the former attic habitable and comfortable, eight pedimented double dormers were added on each roof slope to admit natural light and improve ventilation. The dormer windows, originally inward-swinging pairs of single-pane casements, were replaced with single, outward-swinging three-over-three casements in 1934.¹⁶⁴

The rotunda is illuminated by an oculus skylight located beneath a circular, glazed lantern set at the apex of the dome.¹⁶⁵ The lantern consists of a brick drum with glazing. In 1829 Strickland wrote: "the principal story of the centre building contains in front 8 parlors intended for officers' quarters, and a chapel in the rear 56 feet square, which receives its light from a lantern in the dome."¹⁶⁶ As this room was used at various times as a chapel, assembly or muster room, auditorium and library, the sunlight passing through the lantern and oculus surely rendered this a memorable or spiritual space.

¹⁵⁹Commodore David Geisenger, Governor. Letter to Alfred Day, Esq., Navy Agent, Philadelphia. 4 June 1852. Record Group 24-1-1.1, Correspondence with Naval and Federal Officials, Vol. 4. Mid-Atlantic NARA.

¹⁶⁰Roberts et al., 19.

¹⁶¹William B. Bassett, *Historic American Buildings Survey, United States Naval Asylum, Biddle Hall*, ed. Susan McCowan (Washington, D.C.: National Park Service, 1965), 5.

¹⁶²Keast & Hood Co., 9.

¹⁶³See footnote 159.

¹⁶⁴Roberts et al., 19.

¹⁶⁵Keast & Hood Co., 10.; Roberts et al., 18.

¹⁶⁶William Strickland. Letter to John Branch, John H. Eaton and Samuel D. Ingham, Commissioners of the Naval Hospitals. 1 Dec. 1829. Record Group 45, Box No. 551. NARA.

C. Description of Interior:

1. Floor plans:

Biddle Hall's symmetrical floor plan is a stunted T-shape with a more-or-less continuous corridor running north-south from end pavilion to end pavilion. On the first floor, this dominant axis intersects another passage at the structure's midpoint extending back from the front door to the domed rotunda on the west side. The rear rotunda extension and its flanking rooms occupy the short arm of the "T." The second-floor has a similar plan to the first, except that two passages open from the main corridor on either side of the rotunda dome and extend back to the short arm's west wall; small rooms are located on both sides of this corridor. On the ground floor the east-west cross axis is more evident and runs from east to west under the rotunda.

As planned and used, Biddle Hall's plan was logical and functional. The central pavilion, behind the portico, was designed to house important communal spaces, offices, officers' quarters, and service spaces. Originally, the ground floor contained a dining room with a length of 113'-0", as well as the kitchen, washhouse, laundry, pantries, storeroom, and office.¹⁶⁷ The principal story included eight parlors, officers' quarters, the surgeon's apartment, infirmaries, the apothecary's room, bathrooms, and closets.¹⁶⁸ Perhaps the most important space on this level was the domed rotunda on the west side which, over the years, served as a chapel, assembly or muster room, auditorium, and library. The second floor originally contained the governor's and officers' quarters, as well as the brigs, bathrooms, and closets. The third floor was intended as an attic or garret space at the time of construction, though ca. 1846 it was transformed into living quarters for the ever-increasing number of beneficiaries applying for admittance.¹⁶⁹ The central block, then, truly was the nucleus of activity, the place where institutional affairs were conducted and where the inmates could congregate, attend worship services, and take meals together. Although the precise functions of the various spaces have shifted with the passage of time, the central pavilion always functioned as the principal locus of activity.

By contrast, the wings were purposefully designed to be restive, tranquil, and private spaces. It was here that the pensioners' quarters were arranged along each side of a double-loaded corridor. Each beneficiary was assigned a private 11' x 9' bedchamber, which he was free to decorate as he pleased, with a view across the open verandahs to the beautifully landscaped grounds. The wings were amply lit and properly ventilated for the health and pleasure of the beneficiaries, who also had free use of the verandahs for enjoying the outdoors without having to descend from the building, should they be too ill or infirm to do so. Recreation and reading rooms, workshops where the beneficiaries could learn useful, productive skills such as repairing toys for underprivileged children, the operating room and toilet facilities were conveniently located in the two terminating pavilions.¹⁷⁰ All in all, the floor plan of

¹⁶⁷Gilchrist, 76.

¹⁶⁸*Ibid.*

¹⁶⁹See footnote 159.

¹⁷⁰Gilchrist, 76.

Biddle Hall was appropriately and sensitively designed to satisfy the needs and desires of both inmates and staff.

2. Stairways and elevators:

The grand, symmetrically-placed stairways rise up from the first to the second floor within vast, airy stair halls. Each flight of stairs continues upward without intermediate landings in a double straight run.¹⁷¹ The open string staircases are of an impressive cantilevered design composed of elements carved from Pennsylvania marble. Each step, carved from a single piece of marble, springs in a shallow arch from the step below and is in turn stabilized by the step above.¹⁷² The stair features a balustrade composed of square iron balusters topped by a mahogany rail with a brass handrail set a few inches above the wood.¹⁷³ While the “hanging” stairways rise only to the second floor, the space above floats upward to two monumental skylights added in 1929, which not only illuminate the stairs, but also create an impression of continued upward movement.¹⁷⁴ Two less imposing symmetrical flights of stairs lead to the third floor, located in separate stairwells behind the main stairways.¹⁷⁵

In 1891, a hydraulic elevator was installed at a cost of \$3,074.52.¹⁷⁶ In 1935, the staircases to the third floor were replaced and, in 1953, the grand stairways were enclosed in several places with fire doors and wire glass partitions.¹⁷⁷ Sprinkler pipes were added to the space in 1959, as was a freestanding elevator.¹⁷⁸ This second elevator was ultimately removed, leaving gaps in the original iron railings. There is currently a 6' x 8', 4,000 lb. capacity elevator adjacent to the main stairwell servicing all floors of the building, its brick tower extending above the roofline.¹⁷⁹ Enclosed, fireproof stair towers were installed in 1953 on the west side of the extremities of both wings.¹⁸⁰

3. Flooring:

Hardwood floors were installed throughout the Asylum, including the verandahs. On January 4, 1827, Strickland requested bids for “100,000 ft. of Best Carolina flooring boards 1/4 in. thick.”¹⁸¹ Strickland constructed the floors on a sophisticated system of wood sleepers. Analyzing the framing techniques employed along the first-floor main corridor above a

¹⁷¹Reuben, np.

¹⁷²Roberts et al., 18.

¹⁷³“In your letter of the 13th inst. you requested me to inform you what would be the expense of putting up the handrail at the Asylum and the number of feet of iron required for banisters to the same. The staircase will require 236 banisters, which will average three feet in length each and will amount to 708 feet... Total \$141.00,” noted Superintendent James McClure in 1830. James McClure, Superintendent of the Naval Asylum. Letter to William Read for George B. Harrison, Navy Agent. 15 June 1830. Record Group 45, Box No. 551. NARA.

¹⁷⁴Keast & Hood Co., 7.

¹⁷⁵Reuben, np.

¹⁷⁶Hooker, 246.

¹⁷⁷Reuben, np.

¹⁷⁸*Ibid.*

¹⁷⁹Roberts et al., 74.

¹⁸⁰*Ibid.*, 20.

¹⁸¹William Strickland. Letter to Lewis S. Coryell, Engineer, New Hope, Bucks County. 4 Jan. 1827. Coryell Papers. Historical Society of Pennsylvania.

barrel vault over the basement passage, Keast & Hood Co. noted that “sleepers are in part built-up from the vault below and in part span from the corridor bearing walls. At its crown the barrel vault is directly below the nominal 3 x 5 sleepers. At the haunches, a flat brick subfloor on a concealed fill is constructed twelve inches below the finished floor, meeting the vault where it rises above the floor.”¹⁸² While most of the floors were covered in hardwood floorboards, directly in front of the building’s several fireplaces were square aprons of wide bricks running perpendicular to the mantles. Not all the floors were so grand, for the ground floor was originally left unpaved and filled with construction rubble. The damp in the basement soon necessitated the construction of a complex system of drains and wells, along with the paving of the floor.¹⁸³

An 1843 inventory of goods belonging to the Asylum indicates that carpeting, including “ingrain carpets,” hearth rugs, and “super carpets,” covered the hardwood floors in several rooms, primarily in the officers’ private quarters.¹⁸⁴ Several years later, in 1877, Asylum records mention cocoa matting laid along the halls and corridors.¹⁸⁵ By 1893, the floors of the ground floor lavatories were cemented, as were those in the second floor south wing in 1895.¹⁸⁶ In 1897, if not before, tiled floors were laid in the lavatories.¹⁸⁷ In 1898, a new oak floor was laid in the dining room.¹⁸⁸

Today, the first floor entry area and rotunda has a burgundy terrazzo floor with patterned borders executed in small black and white mosaic tiles. The floors on the ground, first and second stories are finished in red and gray vinyl or asphalt tiles, with ceramic tiles covering the floors in the lavatories. On the third story, the floors are finished in thin hardwood planks running the length of the corridors with wider wooden planks in the pensioners’ quarters.

4. Wall and ceiling finish:

The walls throughout the building are plastered and painted. Even those in the attic and cellar are plastered, despite the fact that neither of these spaces was intended for residential

¹⁸²Keast & Hood Co., 10.

¹⁸³“Our cellars were choked up with dirt, and the air in them was damp and offensive. The dampness however remains, and will remain until the Cellars in whole or in part are paved with flagging or bricks... Mr. Watters thinks it may be necessary to construct drains along the external walls. In my opinion two wells should be dug and the whole cellar paved,” complained Governor James Biddle in 1838. Governor James Biddle. Letter to Commodore Chauncey, President of the Navy Board. 26 Oct. 1838. Record Group 24-1-1.1, Correspondence with Naval and Federal Officials, Vol. 1, 24. Mid-Atlantic NARA.

¹⁸⁴Barton, *A Statutory History*, 43.

¹⁸⁵“The cocoa matting laid in the halls and corridors of this building must be carefully rolled up, and put aside before the floor is cleaned.” Order No. 14, signed by J.R.M. Mullany 7 June 1877, 288.; “Beneficiaries are cautioned not to spit tobacco juice on the cocoa matting or on the floor and paintwork in the Halls.” Order No. 15, signed by Wm. D. Whiting, Capt. USN by order of the Governor 28 June 1877, 289. *General Orders of the US Naval Asylum*. Record Group 71. Mid-Atlantic Branch of the National Archives.

¹⁸⁶Hooker, 247-248.

¹⁸⁷*Ibid.*, 251.

¹⁸⁸*Ibid.*, 253.

use at the time of construction.¹⁸⁹ Initially many of the walls were simply whitewashed and “colored.” For example, financial records for April 1842 itemize “Painting, whitewashing & coloring (the lieutenant’s parlors and bed-rooms)...\$60.00,” “Whitewashing [lieutenant’s kitchen]...\$2.00” and “coloring” the walls of the gunner’s private apartments.¹⁹⁰

Regardless of the surface treatment, the plaster walls are substantial. The plaster, composed of lime, sand, water and goat hair, is several layers thick, particularly in the arches and abutments.¹⁹¹ Indeed, the plaster was so thick and the building so damp that eight tons of coal were ordered annually for the purpose of drying the walls during the winters of 1829, 1830 and perhaps 1831.¹⁹² Asked to inspect the progress at the Naval Asylum in October 1831, the architect John Haviland wrote to the Secretary of the Navy Hospital Fund, “Conformable to your desire I visited the Naval Asylum near Philadelphia with a view of forming an opinion in relation to the necessity of keeping up fires in the building during the approaching winter. I found upon examination that the rooms and passages of the upper story were perfectly dry, as well as the arched dome; most of the rooms in the basement and second floor are also dry, but there are five or six arched rooms that from the thickness of masonry in its abutment is [sic] very wet and will take some time before it [sic] will be sufficiently seasoned for occupancy.”¹⁹³ Strickland took great pains in designing the structural systems of the building to ensure that the plaster would not crack and it has remained remarkably intact.¹⁹⁴ Over the years the stewards of Biddle Hall changed the paint color of the walls and sheathed the walls of the rotunda in painted canvas. The walls remain, however, much as they were when the building was completed in 1833.

5. Openings:

a. Doorways and doors:

Most of the doors in Biddle Hall are five-panel, wooden doors, painted and simply ornamented with three recessed, horizontal, rectangular panels above two recessed,

¹⁸⁹“The building is now roofed in a very substantial manner, and the ceiling of the attic story plastered,” asserted Strickland in 1828. William Strickland. Letter to Samuel S. Southard, Secretary of the Navy. 30 Dec. 1828. Record Group 45, Box No. 551. NARA.; Governor Barron submitted a bill in 1842 “For the necessary repairs lathing and plastering the ceiling of the cellar in consequence of the great dampness - \$256.” Governor James Barron. Letter to Commodore S. Warrington, Chief of Bureau of Docks and Yards. 12 Nov. 1842. Record Group 24-1-1.1, Correspondence with Naval and Federal Officials, Vol. 1. Mid-Atlantic NARA.

¹⁹⁰“Additional bills paid by Robert Pettit, Purser, for expenses of the Naval Asylum for provisions, etc., etc., - Second Quarter of 1842, viz: from 1st April to the 30th June, 1842.” Barton, *A Statutory History*, 61-62.

¹⁹¹There was an outstanding bill on September 1st, 1829 for “lime from George W. Holstein, plastering hair from John Pratt and Joseph Rhodes and plaster of Paris from Arthur Farrien.” “The following list contains the amount of outstanding bills due for workmanship and materials furnished the building of the U. S. Naval Asylum near Philadelphia by George Strickland, Clerk of the Works.” Record Group 45, Box No. 551. NARA.; Repairs to the plastering were also made using hair. For instance, according to the official logbooks, the Asylum “received 15 bushels of goats hair for plastering” in 1843. 4 May 1843. Record Group 24-1-1.10 Station Logs, Log Book 1. Mid-Atlantic NARA.

¹⁹²See footnote 102.

¹⁹³John Haviland, Architect. Letter to R. H. Bradford, Secretary of the Navy Hospital Fund. 15 Oct. 1831. Record Group 45, Box No. 205. NARA.

¹⁹⁴See Part II-B-4, “structural system, framing.”

vertical, rectangular panels. Door surrounds on the first and second floors consist of substantial architrave moldings embellished with corner blocks bearing either circular or square motifs. Door surrounds on the ground and third floors were simpler with thinner, less detailed moldings. While the doors leading to the beneficiaries' rooms were minimally decorated, doors leading to and from the public spaces were more elaborately designed. For instance, the doors to the dining room were originally pairs of folding doors fashioned in 1832 by James McClure, Superintendent of the Naval Asylum.¹⁹⁵ Grander still, the four identical doorways leading to the rotunda room are graciously proportioned with decorative crowns, elliptical fanlights and rectangular sidelights. The double doors themselves have four recessed, horizontal, rectangular panels above two smaller, recessed, vertical, rectangular panels.

To promote circulation and ventilation, a number of the doors leading to the beneficiaries' private rooms were modified post construction. Some were fitted with glazed transoms and screens, while others were transformed more or less into screen doors through the removal of all but the outer stiles and lower panels. The upper panels were then replaced with screens. For privacy, the doors were fitted with solid hinged panels, which could be closed behind the screens.

In 1953, fire towers were added on the rear of each terminating pavilion with metal fire doors. Similar doors were also installed at this time to separate the central block from the wings in the event of a fire.¹⁹⁶ These utilitarian, metal doors are markedly different from the decorative wooden doors and door surrounds designed by Strickland.

b. Windows:

Light and fresh air were considered to be of the utmost importance for the health and well-being of the pensioners. As a result, Strickland designed the Asylum to be bright and airy, illuminated and ventilated by numerous, large windows and a sophisticated array of skylights, light monitors, even an oculus and lantern. The majority of the original windows, those in the pensioners' bedchambers, were double-sash, twenty-four light, wooden windows, now six-over-six double-hung where they survive.¹⁹⁷ These graciously proportioned windows were set within deep window frames fitted with interior shutters, which could be closed to block out light and moderate room temperatures, both winter and summer.¹⁹⁸ These windows were arrayed in such a way as to allow for direct cross-ventilation across the halls in the residential wings. In 1889, the windows were fitted with substantial wire screens to

¹⁹⁵"I have finished 4 pair of folding doors in the dining room," reported the Superintendent of the Asylum, James McClure in 1832. James McClure, Superintendent of the Naval Asylum. Letter to George B. Harrison, Navy Agent, Philadelphia. 30 June 1832. Record Group 45, Box No. 205. NARA.

¹⁹⁶Roberts et al., 20.

¹⁹⁷*Ibid.*

¹⁹⁸"For the last three months ... I have also finished and hung all the doors and window shutters belonging to four rooms," stated the Superintendent of the Asylum, James McClure in 1831. James McClure, Superintendent of the Naval Asylum. Letter to George B. Harrison, Navy Agent, Philadelphia. 30 Sept. 1831. Record Group 45, Box No. 205. NARA.

keep out the insects that bred in the marshy areas near the river and perhaps to dissuade pensioners from slipping out in the wee hours.¹⁹⁹ In 1923, most of the window sashes were replaced with six-over-six sashes.²⁰⁰

In addition to the large, six-over-six double-hung windows found throughout most of the building, tripartite windows composed of a central sash flanked by two, narrower sidelights illuminate the front and rear sides of the central block, to the north and south of the portico, on the ground, first and second floors, as well as the front, rear and sides of the closed pavilions terminating the wings, again on the ground, first and second floors. As for the third floor, when what had previously been the attic story was finished and the ceiling raised ca. 1846, eight pedimented double dormers were added on each roof slope, as well as raised monitor skylights running the length of each wing.²⁰¹ The dormer windows, originally inward-swinging pairs of single-pane casements, were replaced with single outward-swinging three-over-three casements in 1934.²⁰²

Other window shapes include identical bull's-eye windows located high on the walls of all four sides of the rotunda room, the one to the west bringing in light from outside the building, while the others convey light from the rotunda space to the rooms adjoining the rotunda and the main stairwell on the second floor. The rotunda room is a bright, light-filled space, as it is not only illuminated by bull's-eye windows, but also by elliptical fanlights with multi-pane sidelights around the doors and an oculus skylight beneath a circular, glazed lantern set at the apex of the saucer dome.²⁰³ Describing this space in 1829, Strickland noted: "the principal story of the centre building contains in front 8 parlors intended for officers quarters, and a chapel in the rear 56 feet square, which receives its light from a lantern in the dome and has a direct communication with the passage in the centre and the piazzas [verandahs] on the outside of the building."²⁰⁴

Indeed, a complex system of skylights and light monitors brings light to the interior of the building from the roof. In addition to the monitor skylights along the roof and the round skylight over the rotunda, four operable skylights are located over the pediment, two fixed skylights illuminate the main stairwell and various skylights are situated over the dome.²⁰⁵ Some skylights were original to the construction of the building, whereas others were subsequently added.²⁰⁶ Perhaps the most interesting

¹⁹⁹Hooker, 245.

²⁰⁰Reuben, np.

²⁰¹Roberts et al., 19; Reuben, however, writes, "The roof over the wings includes paired dormer windows with pedimented roofs and a continuous monitor added in 1890 at the ridge with operable awning windows in its vertical faces. The monitor terminates in a large glazed section that follows the pitch of the hip." Reuben, N. pag..

²⁰²Roberts et al., 19.

²⁰³Keast & Hood Co., 10; Roberts et al., 18.

²⁰⁴William Strickland. Letter to John Branch, John H. Eaton and Samuel D. Ingham, Commissioners of the Naval Hospitals. 1 Dec. 1829. Record Group 45, Box No. 551. NARA.

²⁰⁵Reuben, np.

²⁰⁶See footnote 159; Furthermore, Governor Charles W. Morgan wrote in 1846, regarding the need for more rooms for pensioners, "To admit light into each of rooms so constructed, and at proper intervals, into the main

skylights, which are likely original to the building, were those described by the Keast & Hood Co. as “architecturally unique ‘nautical prows,’ which were bay windows terminating the third-floor corridors and monitors, modeled after the stern castles of wood fighting ships.”²⁰⁷

In addition to the windows and skylights, which bring in light and fresh air from outside the building, there are also numerous windows within the building which convey borrowed light from one space to the next and promote the circulation of air through the halls of the residential wings. Glazed and screened transoms were added above the doors to some of the bedchambers. Indeed some of the doors themselves were modified to function essentially as screen doors. Along certain corridors, sixteen-light windows were inserted along the tops of the walls, reaching all the way to the ceiling. Furthermore, the lath and plaster walls between one or two rooms, which may have served as storerooms, were replaced along the top with square wooden bars, allowing a free flow of air and light between these adjoining rooms.

6. Decorative features and trim:

Interior decoration consists primarily of ornamental woodwork and trim. Various types of decorative moldings are used throughout the building, including washboard, skirting, picture frame and crown moldings. Washboard moldings were even installed near the stairways on the ground floor in 1830, long before thought was given to making this a residential story.²⁰⁸ Openings, such as doors and windows are all trimmed with decorative woodwork. Most doors, for instance, are framed with architrave door surrounds with corner blocks bearing a square-within-a-square or circle-within-a-square motif. The door surrounds in the rotunda are even more elaborate with grand elliptical fanlights and multi-paned sidelights. Throughout Biddle Hall, the doors themselves are ornamented with recessed, rectangular, vertical and horizontal panels. As for the windows, many are set within deep, box-like wooden frames fitted with paneled, wooden, interior shutters, while all have decorative profile moldings outlining and emphasizing their forms.²⁰⁹ In addition to such trim work,

passage by means of sky lights, or windows in the roof, by which arrangement also, a perfect ventilation would at all times be secure.” Governor Charles W. Morgan. Letter to George Bancroft, Secretary of the Navy. 23 Jan. 1846. Record Group 24-1-1.1, Correspondence with Naval and Federal Officials, Vol. 3, 54-57. Mid-Atlantic NARA.

²⁰⁷Keast & Hood Co., 9.

²⁰⁸“For the last two months I have been employed in putting up moldings and doors, making and fitting washboard down in the basement story near the stairway,” noted the Superintendent of the Naval Asylum, James McClure in 1830. James McClure, Superintendent of the Naval Asylum. Letter to George B. Harrison, Navy Agent, Philadelphia. 31 Dec. 1830. Record Group 45, Box No. 205. NARA.

²⁰⁹Miller and M’Cutcheon, *The Reading-Room*. Drawing from photograph. “A Home for Old Sailors,” *Harper’s Weekly* (23 Feb. 1878) 149; “Since the first of January I have made and fitted down 334 feet of washboard, framed and put together window shutters for four rooms, done whatever carpenter work was required for the hospital and repaired the fence round the premises frequently,” wrote the Superintendent of the Naval Asylum, James McClure in 1831. James McClure, Superintendent of the Naval Asylum. Letter to George B. Harrison, Navy Agent in Philadelphia. 1 Apr. 1831. Record Group 45, Box No. 205. NARA.

simple built-in shelves were installed in some of the beneficiaries' private quarters and wainscoting was chosen to relieve the severity of the walls in the water closets during an 1898 remodeling, although they were subsequently redone in ceramic tile.²¹⁰

Materials other than wood were also used to ornament the interior of the Asylum. The fireplaces in the central block and in rooms flanking the rotunda were adorned with light gray, King of Prussia marble surrounds and mantles, as well as cast-iron fire backs and grates.²¹¹ Some of the fireplace surrounds were intricately carved with small Ionic columns and architectural molding. Ornamental plaster designs were also used in certain public spaces. Plaster rosettes appear to have ornamented the vaults along the main hall on the first floor and the rotunda room is ornamented with plaster, pendentive arches.²¹² In more recent years, a terrazzo floor was installed in the main public spaces on the first floor, framed with a border of small, black and white mosaic tiles arranged in geometric patterns.

7. Hardware:

The original interior hardware was most likely brass, though in some areas, such as the service spaces, it may have been iron.²¹³ The current hardware, most of which dates to the construction of the building, is generally simple and functional. The doorknobs on the doors to the beneficiaries' rooms, for instance, are smooth, round, brass handles of a comfortable size. While the hardware in most of the rooms was relatively simple, there were two bedchambers which Harris ordered to be fitted up for insane patients, but, if his orders were indeed carried out, these rooms may have been used as the cells or "brigs" identified on plans and in Asylum records, given that pensioners found to be insane were immediately transferred to other facilities, such as the Naval Hospital at Norfolk, Virginia.²¹⁴ Based upon rooms for the insane at the Pennsylvania Hospital, these rooms were to have doors secured with two flush bolts, one mortise dead lock and one spring latch and windows secured with strong wire netting on a frame.²¹⁵

²¹⁰Hooker, 253.

²¹¹Roberts et al., 19.

²¹²Miller and M'Cutcheon, *The Broad Stairway*. Drawing from photograph.

²¹³In 1830, the Superintendent of the Naval Asylum, James McClure, wrote "I have been careful to preserve from rust or decay all door and shutter fastenings, locks, bolts, hinges, etc. by cleaning and oiling all such as were necessarily exposed to the weather." McClure's concern about preventing rust seems to indicate that some of the hardware must have been iron. James McClure, Superintendent of the Naval Asylum. Letter to George B. Harrison, Navy Agent, Philadelphia. 31 Dec. 1830. Record Group 45, Box No. 205. NARA.

²¹⁴Two small rooms near the rear of the rotunda on the second floor of the southwest wing are identified as cells on a plan drawn by William Strickland in ca. 1844. Map No. 427, 30-5. Record Group 71, Microfilm Series 1, Reel 107. NARA.; "Heretofore insane patients have been sent from this institution to the Hospital at Norfolk," declared Governor William W. McKean. Governor William W. McKean. Letter to Honorable Thomas W. Gilmer, Secretary of the Navy. 23 Feb. 1844. Record Group 24-1-1.1, Correspondence with Naval and Federal Officials, Vol. 2. Mid-Atlantic NARA.

²¹⁵James McClure, Superintendent of the Naval Asylum. Letter to George B. Harrison, Navy Agent, Philadelphia. 18 May 1831. Record Group 45, Box No. 205. NARA.

8. **Mechanical equipment:**

a. **Heating, ventilation:**

As built, Biddle Hall was heated primarily by coal-burning, iron furnaces on the ground floor which conveyed warmed air throughout the building. In 1829, during the initial phase of construction, Strickland wrote “ ‘I deem it proper to suggest to you the propriety of finishing the furnaces, in order that fires may be made and warm air distributed throughout the building for the purpose of drying the plastering ... The cost of two furnaces with all the necessary pipe and other fixtures will be about 160 dollars each and they can be put up in two or three weeks – they will require about six or eight tons of coal which will be amply sufficient for the winter.’ ”²¹⁶ By 1843 it was decided that if furnaces were constructed under each wing, great quantities of anthracite and charcoal would be saved, as fires then had to be made in each ward because the furnaces in the central area of the basement could not sufficiently heat the entire building. By 1844, there were two new furnaces. The northeast furnace heated the midshipmen’s dining room, the Commodore’s dining room and office, as well as surrounding bedrooms and entries. The southwest furnace warmed the pensioners’ dining room, the doctor’s offices, the chapel and the hospital dining room. Moreover, these two furnaces imparted heat throughout the entire building by means of a simple system of piping and valves.²¹⁷ Over the years more furnaces were added to the basement, until in 1892 five new heaters were installed, replacing the same number of older heaters.²¹⁸ Later, large-tube cast-iron radiators were added to heat the building.²¹⁹

Fireplaces, were located primarily in the central pavilion, in the rooms flanking the rotunda, and in the sitting rooms of the terminating pavilions, were also used to make the rooms more comfortable in cold weather. During the severe winter of 1836-1837, when both coal and firewood were scarce, wood obtained by felling the trees that adorned the grounds was used for warming the building and cooking meals.²²⁰ Though the fireplaces were originally wood-burning, they were later converted to burn coal.²²¹

Small stoves were also used to heat various rooms throughout the building beginning at least in the 1840s. For instance, there are bills for a “cannon coal stove and pipe” in October 1841, two “stoves and pipes” in December of the same year, a “large hall

²¹⁶Commodore William Bainbridge. Letter to the Commissioners of the Naval Hospitals (annexed extract of communication from Strickland) 16 Dec. 1829. Record Group 45, Box No. 205. NARA.

²¹⁷Governor William W. McKean. Letter to David Henshaw, Secretary of the Navy. 20 Oct. 1843. Record Group 24-1-1.1, Correspondence with Naval and Federal Officials, Vol. 1. Mid-Atlantic NARA.

²¹⁸Hooker, 247.

²¹⁹Bassett, *Historic American Buildings Survey, United States Naval Asylum, Biddle Hall*, 6.

²²⁰Hooker, 37.

²²¹Roberts et al., 19.

stove” in November 1842 and a “hall stove and pipe” in March 1843.²²² Indeed the purchases of a total of seven stoves are listed in a compilation of expenses from 1841 to 1843.²²³ Gas was introduced in 1852, however, it seems to have been used exclusively for illumination purposes.²²⁴ By 1898, the New Boiler House was completed and a pair of 100 horsepower Babcock & Wilcox Tub Boilers, supplying steam heat for all the primary Asylum buildings, was installed.²²⁵

b. Lighting:

Biddle Hall was designed to be a light-filled, airy building with large windows, light monitors, skylights, and open verandahs. Nonetheless, candles and sperm oil lamps were needed to light the building when natural light would not suffice.²²⁶ For example, swing-arm, candle brackets were affixed to the walls of the pensioners’ reading rooms.²²⁷ Gas was introduced to the Asylum in late 1852 via street mains along Gray’s Ferry Avenue, replacing candles and oil lamps as the primary means of illumination.²²⁸ By 1896, the Asylum was wired for electric lighting and combination gas-electric fixtures and shades were installed.²²⁹ Even the cellar passageways were fitted with electric lights.²³⁰ The 1900 “Regulations of the United States Naval Home” instructed that gas was to be used only in the absence of electricity for lighting and that when not in use the gas should be turned off at the main where it entered the building.²³¹

c. Plumbing:

At the time the government purchased the site, a pair of wells provided water for the entire property. These two wells represented the only source of water for the Asylum for several years, despite the almost maddening proximity of the Schuylkill River.²³² Biddle Hall was considered well-equipped when built, with nearly \$5,500 spent on water closets, shower baths, cisterns, copper boilers and forty bathtubs in the early stages of construction.²³³ From the very beginning, however, Strickland

²²²“Abstract of bills paid by Thomas Hayes, Navy Agent, Philadelphia, from the first of October, 1841 to 30th April, 1843, on account of Navy Asylum at Philadelphia” and “Additional bills paid by Henry Etting, Purser of Navy Yard, Philadelphia.” Barton, *A Statutory History*, 56-60.

²²³*Ibid.*, 76.

²²⁴Hooker, 140.

²²⁵*Ibid.*, 253.

²²⁶Requisitions for candles, sperm oil, lamp wicks and a hall lamp are listed in “Abstract of bills paid by Thomas Hayes, Navy Agent, Philadelphia, from the first of October, 1841 to 30th April, 1843, on account of Navy Asylum at Philadelphia.” Barton, *A Statutory History*, 56-58.

²²⁷Miller and M’Cutcheon, *The Reading Room*. Drawing from photograph.

²²⁸Hooker, 64.

²²⁹*Ibid.*, 250.

²³⁰*Ibid.*

²³¹“Regulations of the United States Naval Home, Philadelphia, Pa.” Record Group 24-1-1.9, Regulations, 1900, 1916, 22. Mid-Atlantic NARA.

²³²*Ibid.*, 131.

²³³William Strickland. Letter to John Branch, John H. Eaton and Samuel D. Ingham, Commissioners of the Naval Hospitals. 1 Dec. 1829. Record Group 45, Box No. 551. NARA.

urged the introduction of water from the adjacent river.²³⁴ He estimated the total cost, including annual fees to the City of Philadelphia, at \$6,500.²³⁵ Nonetheless, water continued to be drawn solely from the wells for many years to come.

The water supply from these two wells was, of course, inadequate for the burgeoning institution. Upon assuming the governorship of the Asylum in 1834, Lieutenant Cooper reported that the current water supply was so insufficient that it was virtually impossible to keep the building clean and habitable.²³⁶ Little had changed by the time Commodore Biddle was appointed Governor in 1838, and this in the city known for its sophisticated Fairmount Waterworks.²³⁷ Upon recognizing the difficulties presented by such a paucity of fresh water, Biddle wrote to the President of the Navy Board, saying "It is amazing that this building should have been so long occupied without the Schuylkill water being introduced, its introduction is absolutely necessary, more necessary than at the Navy Yard where it was introduced several years ago. A proper attention to health and cleanliness and safety requires a more abundant and convenient supply of water than we have at present."²³⁸ His request was honored and by 1839 water was piped through the former kitchen gardens to the building from a main laid along Cedar (now South) Street by the Philadelphia Water Commissioners at the request of the Navy Board.²³⁹ While the annual fees were initially high, the Water Board agreed that they would be reduced as the surrounding neighborhood developed.

Unfortunately this new water supply was soon deemed insufficient, as the water pressure was not great enough for it to rise above the first floor during the daytime. Thus, in 1847 capacious tanks were introduced on the third floor to ensure adequate water pressure for the water closets. According to Hooker, "It is hoped that larger mains will be laid soon as during the daytime in summer the water seldom rises to the first floor of the building although during the night it rises to the attics and thus fills the tanks which it has been necessary to put in to insure a supply of water for daily use."²⁴⁰ By 1850, however, larger mains were laid along Gray's Ferry Avenue and the Asylum chose to disconnect from the City mains along Cedar Street to take advantage of the greater flow of water through the new mains along Gray's Ferry.²⁴¹ In 1885, the mains on Gray's Ferry Avenue were again enlarged.

²³⁴Ibid.

²³⁵Ibid.

²³⁶Hooker, 131.

²³⁷"Almost every body, at home and abroad, has heard of the beautiful spot called 'Fairmount:' at least every 'traveled' person has. It would be considered as the absence of all taste, for a stranger to appear in Philadelphia, and not to devote an hour to visit 'the Fairmount Water works,'" wrote Andrew McMakin, author of a collection of early views of the city and its environs. Andrew McMakin, *Panorama and Views of Philadelphia, and its Vicinity. Embracing a Collection of Twenty Views. From Paintings by J.C. Wild. With Poetical Illustrations of each Subject, by Andrew M'Makin* (Philadelphia: J. T. Bowen's Lithographic and Print Coloring Establishment, 1838), 1.

²³⁸Hooker, 132.

²³⁹Ibid.

²⁴⁰Ibid., 64.

²⁴¹Ibid., 134.

By 1851, an inventory of Biddle Hall listed approximately five bathtubs and twenty-four water closets.²⁴² In 1857, however, the iron pipes connecting the Asylum buildings to the water mains, having been laid too close to the surface of the ground and having become rusty and clogged with mineral deposits, burst and were re-laid at a greater depth.²⁴³ Nonetheless, complaints regarding the scarcity of water began anew as the district became built-up and more and more people made demands upon the water supply brought to the area through relatively small mains. In 1871 it was determined to install larger water tanks, which would be filled during the night by the flow of water. These tanks were installed in the rear of the rotunda room, though the strength of the floors needed to be assured, as the tanks could weigh as much as twelve tons when full.²⁴⁴ Even so, there were still complaints regarding the inadequacy of the water supply late in the 1870s. In 1887, a sanitary report for the U. S. Naval Hospital, then in Laning Hall, cautioned: "the water supplied by the City is very bad, so much so indeed, that every one who regards his health, has it boiled or filtered."²⁴⁵ As a result, the inmates must have been pleased when Pasteur filters were installed in 1897 wherever drinking and cooking water was used.²⁴⁶

Strickland's clever design for the water closets included flues for conveying off the foul air from the wells. Unfortunately these flues did not reach the roof and, when improvements to the third floor were begun ca. 1846, it was found that they were discharging fetid air into the attic story.²⁴⁷ This "evil" was quickly remedied by extending the piping through the roof. In 1885, improved water closets were installed on the first and second floors.²⁴⁸ The ensuing year, two 600-gallon water tanks, each fitted with fire hoses, were installed in the garret space near the main portico.²⁴⁹ In 1889, the sewer line along Bainbridge Street, to which the Asylum was connected, was completed to the river by the City of Philadelphia and the Baltimore & Ohio Railroad Company.²⁵⁰ The following year, upon completion of the Annex to Biddle Hall, what had been the laundry room was converted into a bathroom complete with several bathtubs.²⁵¹ In 1891, seven improved porcelain-lined bathtubs were installed in a new bathroom.²⁵² Then in 1893, water closets on the ground floor

²⁴²*Ibid.*

²⁴³*Ibid.*, 135.

²⁴⁴*Ibid.*, 137.

²⁴⁵Hord, np.

²⁴⁶Hooker, 251.

²⁴⁷"I have the honor to report to you the commencement of the improvement in the attic story of the Asylum... It was discovered that the flues constructed for the purpose of conveying off the foul air from the wells of the water closets, had never been carried through the roof, and were, consequently, discharging it into the attic story, rendering the atmosphere there insupportably offensive, and I had the evil immediately remedied by the extension of the pipes," wrote Governor Charles W. Morgan in 1846. Governor Charles W. Morgan. Letter to George Bancroft, Secretary of the Navy. 27 Feb. 1846. Record Group 24-1-1.1, Correspondence with Naval and Federal Officials, Vol. 3, 66-67. Mid-Atlantic NARA.

²⁴⁸Hooker, 241.

²⁴⁹*Ibid.*

²⁵⁰*Ibid.*, 245.

²⁵¹*Ibid.*, 246.

²⁵²*Ibid.*

were replaced with the latest, so-called “Perfection closets.”²⁵³ Two years later, a new toilet room was added at the end of the south corridor in what had been the carpenter’s quarters, while the toilet room in the rear of the north corridor in the basement was remodeled by the Vulcanite Tile & Mosaic Company and the McCambridge Company with the best available water closets and tiling.²⁵⁴ In 1898, water closets on the ground floor were remodeled with windows, doors, wainscoting, tile floors and modern toilets.²⁵⁵ And so the plumbing systems and fixtures were updated again and again over the years. It was not until ca. 1925, when a massive 50,000 gallon water tower was constructed on the site, that the water pressure problems which had plagued the institution over the years were finally satisfactorily remedied.

D. Site:

1. Historic landscape design:

Although Strickland was never officially accorded the title of landscape architect for the Asylum, he did—in his own words—occupy himself with “regulating [the] grounds and planting trees.”²⁵⁶ Strickland not only designed and oversaw the construction of the site’s three primary buildings, but also surveyed the property and devised the Asylum’s first landscape plan. While the landscaping has certainly changed over time, it nonetheless continues to bear Strickland’s mark, as do so many aspects of the Asylum complex. It is, of course, somewhat difficult to determine exactly what sort of a landscape Strickland envisioned for the Asylum. Records indicate that in 1834 Strickland called for the enclosure of the grounds with a board fence, the grading and paving of existing paths and roads, the creation of a semicircular gravel walk leading to Biddle Hall, the sowing of a lawn in front of the building, and the planting of numerous trees.²⁵⁷ While appropriations for all of these

²⁵³*Ibid.*, 247.

²⁵⁴*Ibid.*, 251.

²⁵⁵*Ibid.*, 253.

²⁵⁶Although he was not officially accorded this title, Strickland did occupy himself with “regulating [the] grounds and planting trees.” William Strickland. Letter to John Branch, John H. Eaton and Samuel D. Ingham, Commissioners of the Naval Hospitals. 1 Dec. 1829. Record Group 45, Box No. 26. NARA.; Furthermore, according to Jackson, “...not only did he [Strickland] design the structure and lay out its grounds, but he was designated to superintend the construction of the building.” Jackson, *Early Philadelphia Architects*, 20.

²⁵⁷On May 3, 1834, William Strickland wrote to Commodore John Rodgers, President of the Navy Board of Commissioners, noting “I would also request the attention of the Board to the planting of trees and forming of a circular gravel walk from the entrances to the portico of the building. The ground should be plowed up and grass sown in front as soon as practicable. There should be a stable and milk house constructed at a convenient point in the rear of the building, and a plain board fence put up along the south west boundary of the grounds.” William Strickland. Letter to Commodore John Rodgers, President of the Navy Board of Commissioners. 3 May 1834. Record Group 45, Box No. 551. NARA.; A few days later he provided an estimate for the aforementioned plans to Commodore Barron. He wrote, “Estimate of the cost of enclosing and otherwise improving the grounds of the United States Naval Asylum near Philadelphia – For 1200 running feet of board fencing 10 feet in height, to be put up on the S West line of the property extending from the Grays Ferry road to the river Schuylkill - \$820.00. For excavating 4000 cubic yards of earth on the above mentioned road, in front of the premises - \$800.00. For regulating paving and fixing curb stone, gutters and foot ways, for 1200 feet of a sixty foot wide street - \$2,900. For forming a semi circular gravel walk between the two entrance gates of the above street or road to the portico of the

improvements were not immediately forthcoming, all were eventually enacted. Thus, from the very beginning, the Asylum had delineated boundaries (though it was not until later that the farm fences were replaced with the board fences called for by Strickland), designated walks and drives, a grand lawn, and abundant trees. Early renderings of the landscape vary greatly, giving rise to the supposition that perhaps they reflect more the artists' sensibilities than the realities of the design. Most, however, depict various clumps of deciduous and coniferous trees to the north and south of Biddle Hall and along the front lawn, with shrubbery lining but not obstructing the view of the Schuylkill River.²⁵⁸ Virtually all early views, however, indicate the existence of the aforementioned lawn or parade ground in front of Biddle Hall and the gently curving drive leading from Gray's Ferry Avenue to the grand portico.

Over the years, the various Governors of the Asylum left their mark on the grounds. Perhaps the most significant changes to the overall appearance occurred during and following the brutal winter of 1836-1837. Under Governor James Barron's command, the Asylum was denuded of nearly all of its mature trees, desperately needed to provide fuel to warm the buildings and cook meals. Although by springtime the grounds looked ravaged and forlorn, the removal of these trees allowed for the implementation of a new, more formal landscape design. Upon taking command of the Asylum in the autumn of 1838, Commodore Biddle immediately set about planting trees, though for want of funds, his proposed planting scheme was not fully realized until approximately 1849.²⁵⁹ Biddle had grand plans for the Asylum grounds and requested the funding to execute them. In 1840, he addressed Commodore Chauncey, President of the Navy Board, explaining: "the pavement around our building is of brick--this is unsightly and exceedingly inappropriate to a marble building--it ought to be of flagging--the expense is estimated at 1000 dollars. Trees, and shrubbery, and walks, about our grounds are important, and for which the sum of 1000 is required."²⁶⁰ Although the trees planted under Biddle's administration were but mere switches purchased from a nursery in bundles of a dozen, they did much to improve the appearance of the property as they matured.

Governor Charles W. Morgan had designs of his own, upon assuming the governorship. In 1846 he wrote to Secretary of the Navy George Bancroft: "I have the honor to state that some shade trees are much needed for the grounds of the Asylum. We have now but a partial supply of maple, and other ordinary trees-- and a few of a less perishable kind, such as Elm, along the north wall and in front of the main building, and some yew and box trees for the cemetery, all of which could be purchased for the sum of twenty-five dollars, would

Building say 20 feet in width by 900 feet in length - \$1,000. For plowing harrowing & sowing grass on the ground in front of the building together with the purchase & planting of about 80 trees - \$580.00. For building a milk house, ice house & stabling (the materials for which may be had by pulling down an old barn, now of no use & awkwardly situated on the premises) - \$2,800.00. Total \$8,900.00." William Strickland. Letter to Commodore James Barron, Commanding Officer, Philadelphia. 12 May 1834. Record Group 45, Subject File, Box No. 551. NARA.

²⁵⁸See Part III-B, "early views."

²⁵⁹Hooker, 38.

²⁶⁰Governor James Biddle. Letter to Commodore Chauncey, President of the Navy Board. 29 July 1840. Record Group 24-1-1.1, Correspondence with Naval and Federal Officials, Vol. 1. Mid-Atlantic NARA.

greatly improve the general appearance of the premises.”²⁶¹ The fact that Morgan called for shade trees, not just trees, is significant as it implies that the grounds were intended to be used and enjoyed by the beneficiaries not simply admired from the portico and verandahs.

By 1903 many of the trees needed to be replaced, as the grounds were once again being denuded, this time by caterpillars. According to a report drafted by Governor C. E. Clark on July 18, 1903, “the grounds of the Home are fast becoming denuded of trees. Most of them are old, but their decline is rapidly increased by the uncontrollable caterpillar pest, which has infested the place for years. Every effort seems to have been made ... to no avail. For some unknown reason young trees set out soon die, or if they do live, their growth is slow. This subject is being thoroughly gone into and the planting of a large number of trees in the Fall on entirely new lines, is contemplated.”²⁶² As in the past the changing of the guard brought with it alterations to the landscape design of the Asylum.

In addition to the evolution of the landscaping, including trees, shrubbery, flowerbeds, lawns and walks, the hardscaping also changed over the years. Of particular interest is the way in which the perimeters of the property were delineated. The grounds were originally surrounded by wooden farm fences, most likely of a split-rail variety. These were in such a dilapidated condition that hogs and cows roamed the premises and neighboring landowners occasionally turned their horses and cattle out to pasture on the grounds, much to the displeasure of the Asylum staff.²⁶³ From the outset, the enclosure of the grounds was deemed a high priority and much time and energy was expended in repairing and propping up the wooden fences. Under Commodore James Biddle, board fences finally replaced the worn plantation fencing.

Nonetheless, there was great interest in surrounding the grounds with substantial walls and gatehouses which would serve to keep livestock off the grounds, beautify the premises, prevent pensioners from leaving without permission, and discourage trespassing and thievery. After all, the Governors were forced to issue general orders such as the one insisted upon by Governor Charles W. Morgan which read: “no person attached to the Asylum will be allowed to carry away any public property, offal, or other articles belonging to the Asylum.”²⁶⁴ Substantial brick walls, it was thought, would help remedy such problems. In 1842 the question of erecting thick brick walls was broached. The initial estimates were deemed prohibitively expensive by the Secretary of the Navy, but by 1845 Governor Morgan was authorized to erect walls along Gray’s Ferry Avenue, the southwest corner of the property and around the burial ground to the north of Biddle Hall. Brick walls with stone foundations were commenced under the supervision of the Governor, who gave his personal attention to the matter rather than incurring the expense of a foreman. The

²⁶¹Governor Charles W. Morgan. Letter to George Bancroft, Secretary of the Navy. 30 Mar. 1846. Record Group 24-1-1.1, Correspondence with Naval and Federal Officials, Vol. 3. Mid-Atlantic NARA.

²⁶²Rear Admiral C. E. Clark, Governor. Report to the Chief of the Bureau of Navigation. 18 July 1903. Record Group 45, Box No. 26. NARA.

²⁶³Governor William W. McKean. Letter to L. Warrington, Chief of the Bureau of Yards and Docks. 11 Aug. 1843. Record Group 24-1-1.1, Correspondence with Naval and Federal Officials, Vol. 1. Mid-Atlantic NARA.

²⁶⁴*General Orders of the U. S. Naval Asylum*. 1844. Record Group 24-1-1.1, Correspondence with Naval and Federal Officials, Vol. 2. Mid-Atlantic NARA.

front wall was completed in September 1845 and southwest wall on Sutherland Avenue and the cemetery wall were finished soon thereafter. Solid and imposing, these low brick walls are surmounted with marble coping and ironwork fences of a design similar to that of the verandahs along Biddle Hall. Evans and Watson, local blacksmiths, expertly executed the railing in a diamond-pattern with rosette-like motifs adorning each intersection.²⁶⁵ The whole is topped with delicately-wrought, *fleur-de-lis* shaped finials. Tall granite piers mark the openings along Gray's Ferry Avenue and support the heavy iron gates, adding to the formidable appearance of the walls.

Even after these imposing walls were completed, the Asylum was still somewhat vulnerable along the northern side. As Governor Morgan wrote in 1845: "the grounds of the Asylum are...very much exposed, and accessible to all sorts of intrusion by day and night. The Pensioners themselves cannot be at any time restrained, or prevented from leaving the premises when they are so inclined and very little, indeed, no efficient security can be given to the public property under the present arrangement."²⁶⁶ As a result, estimates were accepted for the construction of a wall along the northern edge of the property. It was not until 1856, however, when the City decided to open Shippen Street that work began in earnest on this portion of the wall. By January 1858 the north wall was finally finished, completing the enclosure of the main grounds nearly thirty-two years after the government took possession of the property.

In order to "accommodate the porter at the gate...[and] to give completeness to our building and our grounds" gatehouses were constructed at the three entrances to the property.²⁶⁷ Two small, one-room stucco-over-masonry gate lodges with standing seam metal roofs were erected in 1844 at the north and south entrances along Gray's Ferry Avenue, with a third added along the western side the following year. They were built at the same time, by the same workmen, with the same materials, and in the same Greek mode as the Governor's and Surgeon General's Residences. Governor Morgan noted on August 20, 1844: "the two porters' lodges add much to the comfort and beauty of the Asylum. The reason for building them without positive instruction [i.e. authorization from the Secretary of the Navy] was that they are built of the chips as it were of the new Governors and Surgeons houses and at a less expense than if built under regular contract."²⁶⁸ As these gatehouses share many details with the Governor's and Surgeon General's Residences and were constructed while Strickland was overseeing their construction, it is likely that he had a hand in their design. Even if they were not in fact designed by Strickland, which they most likely were, they are nonetheless of a design which compliments the styling of Biddle Hall and the Governor's and Surgeon General's Residences.

²⁶⁵Roberts et al., 11.

²⁶⁶Governor Charles W. Morgan. Letter to George Bancroft, Secretary of the Navy. 11 July 1845. Record Group 24-1-1.1, Correspondence with Naval and Federal Officials, Vol. 2. Mid-Atlantic NARA.

²⁶⁷Governor James Biddle. Letter to Commodore Chauncey, President of the Navy Board. 26 Oct. 1838. Record Group 24-1-1.1, Correspondence with Naval and Federal Officials, Vol. 1. Mid-Atlantic Branch of the NARA.

²⁶⁸Hooker, 129.

While the landscaping and hardscaping of the grounds changed over time, so too did the contours of the land itself. The property was not always as level as it appears today. “Traditions among old people familiar with this region are to the effect that in the Pemberton days the land about here was undulating. Grays Ferry Road was of a higher grade than now and passed over a slight hill somewhere in front of the Pemberton Estate,” notes Hooker.²⁶⁹ The northeastern reaches of the property were substantially higher than the low-lying southwestern corner and the land sloped not only down towards the Schuylkill River, but also towards this southwestern side. From the outset, the government took pains to grade the site. In 1827 a bill was submitted to the Philadelphia Navy Agent Thomas Harris “for filling 4694 yards of earth taken from the hill in front of the river and hauled to the wharf. For 881 yards hauled to form a causeway leading to the wharf. For 4596 yards taken from the cellar of the asylum and hauled to the wharf.”²⁷⁰ A few years later, when construction began on the Governor’s and Surgeon General’s Residences in 1844, a considerable mound of earth was built up so that the latter might rest at the same elevation as the former. Significant filling and grading work was also undertaken in 1881.²⁷¹ Some of this work was executed to provide level building sites for the ever-increasing number of outbuildings. Nonetheless, the fact that portions of the property lie within the 100-year floodplain of the Schuylkill River and are prone to dampness certainly influenced the decision to grade the site, altering its once undulating, marshy, pastoral character and transforming it into what the Governors of the Asylum considered to be more salubrious and aesthetically pleasing, landscaped grounds.

Although the writings of Strickland and the first several Governors do not specifically identify a rationale for the development of the Asylum’s landscape design, beyond “improving” the site, it is probable that from the very beginning it was hoped that a pastoral setting and landscaped grounds would provide a therapeutic, or at the very least healthful, environment for the aging beneficiaries and convalescing patients. As observed by the editors of *Changing Places: ReMaking Institutional Buildings* (1992): “one may see institutions as treatments, and their places (buildings and landscapes) as instruments for delivering these treatments to the population.”²⁷² Indeed, during the nineteenth century it was believed that bucolic environments, considered tranquil and unsullied, were far more salubrious than urban centers, believed to be frenetic, polluted, and corrupt. According to the authors of *The Art of Philadelphia Medicine* (1965): “in an era when the causes of infection were little understood, it was generally believed by laymen and physicians alike that few were the afflictions of mankind that could not be relieved or prevented by sufficient pure water and fresh air.”²⁷³ Consequently, asylums, hospitals, orphanages, prisons, and all manner of institutional facilities were often constructed in the countryside near, but removed from, major metropolitan areas. In the greater Philadelphia area, for instance, most of social reform institutions erected during this period were established in rural areas, although with

²⁶⁹*Ibid.*, 236.

²⁷⁰Robert Patton. Bill Submitted to Thomas Harris, Philadelphia Navy Agent. 10 May 1827. Record Group 45, Box No. 551. NARA.

²⁷¹Hooker, 237.

²⁷²Lynda H. Schneekloth, Marcia F. Feuerstein and Barbara A. Campagna, eds., *Changing Places: ReMaking Institutional Buildings* (Fredonia, NY: White Pine Press, 1992), 32.

²⁷³Turner et al., 119.

easy access to the city. While over time the city encroached upon these enclaves, they were initially isolated, self-sufficient, models of experimental nineteenth-century reformism in which the landscape played an important role by contributing to a healthful environment necessary for the recuperation and reformation of the inmates.

As the land acquired for the Asylum had previously been a “plantation,” the setting was agrarian. Rather than denying the essential character of the land, the early landscaping schemes seemed to embrace, yet sanitize it, with the result a sort of “enhanced” pastoral landscape. That is, the fields were mown and romantic clumps of trees were planted here and there with curvilinear paths winding their way through the softly undulating hills. A pastoral landscape such as this was considered to be the most salubrious and desirable of all landscapes according to period healthcare perspectives. It is likely that the Asylum grounds were viewed, at least subconsciously, as a healing and therapeutic environment. In any event the beneficiaries and patients could enjoy fresh air and take moderate exercise, which was recommended. To encourage taking advantage of landscape, paths were carefully leveled and covered in gravel and other paving surfaces and shade trees were planted to improve “the comfort and appearance” of the grounds. In later years, a fountain was erected in front of the Governor’s Residence and two summer pavilions were constructed to enhance the beneficiaries’ and convalescents’ experience of their natural surroundings. The goal, then, was to create a useful and aesthetic environment, one which would refresh and rejuvenate body, mind and soul.

The fact that a botanical garden in which the elderly and afflicted could choose to labor was proposed on at least one occasion gives some real credence to the notion that Asylum officials understood the potential therapeutic benefits of the landscape. Although the administration realized that men who had spent their lives at sea were unlikely to want to take up farming in their final years, there was some preliminary interest in creating what might be referred to as a healing garden. According to Hooker: “one Honorable Secretary proposed the establishment of a botanical garden to be taken care of by the old men, who, he thought would be pleased to have the employment for their leisure hours, and would take pride in the results of their labor. How well he must have understood the gallant tars who manned the ships of his Department! Could he have lived among them for a short time, and seen what their principal desire in the way of amusement was, he would, no doubt have been greatly astonished.”²⁷⁴ Likewise, in 1842 Governor Barron wrote to Secretary of the Navy Upshur: “Doctor Barton is now occupied with the Surgeon’s Board of Examination – so that I have not had any particular conversation with him on the subject of the proposed Botanic Garden, but I cannot forbear to say that I do not think it will be agreeable to our old Tars, to be so employed nor is it probable that at their ages etc. they could render him any service in an occupation so new to them.”²⁷⁵ While a healing garden was not created, the grounds, as it were, did ultimately bear more tangible fruits. Vegetable gardens provided food for the inmates and, when the fences were in disrepair, for neighboring livestock,

²⁷⁴Hooker, 57.

²⁷⁵Governor James Barron. Letter to Abel P. Upshur, Secretary of the Navy. 25 Apr. 1842. Record Group 24-1-1, Correspondence with Naval and Federal Officials, Vol. 1. Mid-Atlantic NARA.

namely hogs and cows.²⁷⁶ Furthermore, the Asylum annually sold hay with the proceeds going to the so-called Grass Fund.²⁷⁷ The land surrounding the Asylum thus had more than ornamental or therapeutic value, though these were perhaps its principal attributes.

The Asylum today remains a park-like setting, a refuge from the bustling city, which now encircles the compound. In fact, it is one of the most expansive privately owned green spaces in Center City Philadelphia. From blocks away, the location of the Asylum is discernible thanks to its tall deciduous trees, visible above the surrounding row houses and remarkable for their rarity in such an urban setting. On account of years of neglect, the site has become unkempt and overgrown, however its basic landscape design is still legible. As it has been since Strickland's day, perhaps the most notable landscape feature is the lawn or parade ground in front of Biddle Hall, adorned with a flagpole from which the American flag once flew. Likewise, the semicircular drive laid out by Strickland still leads from Gray's Ferry Avenue to the front of Biddle Hall, though it has been repaved many times since in a variety of different materials. In terms of the plantings, however, much has changed. Today, flowerbeds, various shrubs, including Forsythia, Privet, Rhododendrons, Azaleas and Roses, and many fine trees embellish the grounds, particularly in springtime.²⁷⁸ Nonetheless, the trees are what truly define the landscape architecture of the place. In addition to the trees scattered and clumped about the grounds, such as Elms, Pin Oaks, Sugar Maples, Ginkgo Bilobas and various fruit trees, the parade ground is lined with two, very grand, double allees of London Plane trees.²⁷⁹ These trees march in regular step along the same axis as Biddle Hall and the Governor's and Surgeon General's Residences, with one allee directly in front of the buildings and the other closer to the enclosure wall along Gray's Ferry Avenue. They are mature, specimen-quality trees, taller than Biddle Hall. Their upper boughs arch together, forming twin, vaulted corridors of space and shelter, which echo the masonry vaulted corridors of Biddle Hall. Thus, while the Asylum's landscape design has naturally evolved over time, it retains certain fundamental elements and remains faithful, at least in spirit, to the original design concept developed by Strickland and the first Governors of the Asylum.

2. Other significant structures on the site:

In addition to Biddle Hall, the centerpiece of the Naval Asylum complex, several other notable buildings were constructed on the site, including the Governor's and Surgeon General's Residences and Laning Hall.

The Governor's and Surgeon General's Residences

From the outset, Biddle Hall housed both the Naval Asylum and Naval Hospital. The former, under the supervision of the Governor, and the latter, under the supervision of the Surgeon General, coexisted relatively harmoniously, though in 1842 William Strickland was called upon to divide Biddle Hall down the middle with a lath and plaster partition. The

²⁷⁶Hooker, 43.

²⁷⁷Secretary of the Navy Abel P. Upshur. Letter to Governor James Barron. 27 Oct. 1842. Record Group 24-1-1.1, Correspondence with Naval and Federal Officials, Vol. 1. Mid-Atlantic NARA.

²⁷⁸Roberts, et al., 20-21 (Interim Report).

²⁷⁹Ibid.

division of the building was soon deemed inexpedient and the partition removed but a year and a half later. At this time, the institution was placed under the sole command of the Governor.²⁸⁰ Nonetheless, between 1844 and 1848 virtually identical residences were erected for the two highest-ranking officers, the Governor and the Surgeon General. Indeed, great pains were taken to ensure that they would be of equal stature, as an earthen mound was constructed upon which to build the Surgeon General's Residence.²⁸¹ Indeed, it was Strickland's Greek Revival design for these residences that transformed the site into a bona fide complex, one of the most impressive, functionally and aesthetically unified, architectural assemblages in the country.

Strickland designed the residences in a Greek Revival, villa mode compatible with and sympathetic to the Neoclassical appearance of Biddle Hall. With gracious proportions, symmetrical facades, double verandahs, and fine detailing, they closely resemble Biddle Hall in terms of their overall character. Flanking and framing Biddle Hall, these two-story, three-bay buildings with full attics and cellars, measure approximately 99' x 47' and reach roughly 29' from ground to cornice.²⁸² They are composed of granite ashlar foundations with walls of stucco-covered brick above. The walls are punctuated with plain rectangular windows; some extend to the floor and provide easy access to the verandahs. The verandahs, located on both the first and second floors, are composed of cast-iron columns and ornamental railings, like those of Biddle Hall. Each verandah is supported with four pairs of slender, fluted cast-iron columns with lotus-leaf capitals.²⁸³ The corners of the buildings are marked by flat pilasters supporting a full entablature cornice. The simple box eave is crowned by a low parapet concealing a standing seam metal roof in a hip form. At the rear of each house is a two-story service wing containing kitchens and servants' quarters. Strickland not only designed the residences with an architectural character similar to that of Biddle Hall, he similarly constructed them to be fire resistant. For instance, he ordered plaster fill inserted between the joists under the floorboards of each floor of the residences in order to prevent a fire from spreading from floor to floor.²⁸⁴ Strickland thus remained faithful to his reputation for well-proportioned, classical design and innovative fireproof construction.

Despite fundamental similarities with Biddle Hall, these houses were intended by Strickland to be more highly ornamented, both outside and inside, befitting their purpose as private residences for commanding officers. Though the verandah railings sketched by Strickland in front and side elevations signed on July 28, 1844 closely resemble the latticework railings of Biddle Hall, at some point it was decided that they should be further embellished with ironwork in American nautical motifs, including anchors, ropes, eagles, and dolphins.²⁸⁵

²⁸⁰Governor Charles W. Morgan. Letter to George Bancroft, Secretary of the Navy. 14 Mar. 1845. Record Group 24-1-1.1, Correspondence with Naval and Federal Officials, Vol. 2. Mid-Atlantic NARA.

²⁸¹Governor Charles W. Morgan. Letter to John Y. Mason, Secretary of the Navy. 8 Aug. 1844. Record Group 24-1-1.1, Correspondence with Naval and Federal Officials, Vol. 2. Mid-Atlantic NARA.

²⁸²Pitts, 1.

²⁸³William B. Bassett, *Historic American Buildings Survey, United States Naval Asylum, Governor's Residence* ed. Susan McCowan (Washington, D.C.: National Park Service, 1965), 2.

²⁸⁴Keast & Hood Co., 16.

²⁸⁵William Strickland, *Two Unidentified Building Elevations* (28 July 1844). Historical Society of Pennsylvania.

Governor Charles W. Morgan, however, chose not to retain the decorative pediments designed by Strickland. The Governor, writing to Secretary of the Navy George Bancroft, opined:

I have the honor to acknowledge the receipt of your letter of the 14th Inst. enclosing the duplicate of a bill from John McArthur, for making two ornamental pediments from the designs of Mr. Wm. Strickland, Architect for the new houses, and beg leave to state that the ornaments referred to consist of groups of figures, representing eagles, anchors, cannon, and cannon balls, carved of wood and painted white, which were intended by Mr. Strickland to surmount the front of the two new buildings. One of them was placed on the Governor's House for a short time, but I had it removed into the cellar of the main building. The other was left in the shop of the carpenter – and, as they were altogether inappropriate, had been prepared without my knowledge – and could not be considered legitimately part of the buildings – I declined the approval of the bill for them until some explanation upon the subject should be made to the Department.²⁸⁶

While the exteriors are somewhat less ornamented than originally intended, the interiors were finely decorated. Arranged around the central staircase in a traditional four-room plan, the rooms were designed with high ceilings, gracious proportions, Greek Revival trim, maple strip or oak parquet floors, and King of Prussia marble fireplaces. To one side of the hall, two rooms were divided by a screen of twin, freestanding columns supporting a full entablature. Pocket doors separated the two rooms opposite this double parlor. Upstairs, the corresponding four rooms were used as bedchambers and studies. Original decorative work of note included architrave molding around doors and windows, an elaborate plaster cornice with acanthus leaf moldings in the double parlor, fluted columns with lotus-leaf capitals akin to those on the exterior verandahs, again in the double parlor, and recessed ceiling panels surrounded by egg-and-dart molding and plaster ceiling medallions with a leaf motif.²⁸⁷ The Governor's and Surgeon General's Residences are accordingly more elaborate expressions of Greek Revival expression than Biddle Hall, yet taken as a whole these buildings create a stylistically unified, architectural ensemble. It must be noted, however, that vacant since 1976, these residences have deteriorated greatly due to deferred maintenance, environmental degradation, and repeated vandalism.

Laning Hall

By the time of the Civil War conditions at the Naval Hospital, still housed in Biddle Hall, had become uncomfortably crowded. It was decided to erect a new building, approximately 400' to the rear of Biddle Hall, to be exclusively devoted to the specialized needs of the Hospital. John McArthur, Jr. (1823–1890), best known for his exuberant Philadelphia City Hall (1871–1901), was selected as the architect. McArthur designed Laning Hall (1864–1868), as the building came to be known, in the French Second Empire mode he helped to popularize in the Philadelphia area. Erected by the local construction firm of

²⁸⁶Governor Charles W. Morgan. Letter to George Bancroft, Secretary of the Navy. 16 Feb. 1846. Record Group 24-1-1.1, Correspondence with Naval and Federal Officials, Vol. 2. Mid-Atlantic NARA.

²⁸⁷Bassett, *Historic American Buildings Survey, United States Naval Asylum, Governor's Residence*, 3.

Richard J. Dubbins at an approximate cost of \$172,500, Laning Hall measured 325' x 85' and was a twenty-five bay, three-story structure with a raised basement.²⁸⁸ The overall design was symmetrical and consisted of a series of tall pavilions linked by lower receding wings.²⁸⁹ The foundations were of random, battered ashlar. The common bond brick walls were enlivened with Flemish gables, brownstone belt courses, two-over-two windows and brick quoins. Recessed paneling with "X" and "I" motifs rendered in brick ornamented the cornice.²⁹⁰ The mansard roof, punctuated by gables bearing a Flemish profile, is typical of the Second Empire idiom. It was faced with gray slate shingles on the lower slopes with tar and gravel on the upper slopes. The general floor plan was cross-shaped with a grand, cast-iron and mahogany staircase. Just as Biddle Hall was designed to be cutting-edge, so too was Laning Hall. The Hospital was equipped with the very latest in heating and ventilation systems. According to the *U. S. Naval Home Reuse Study* (1980), "a steam boiler house behind the hospital produced heated air which traveled underground to the new hospital and rose vertically through wall chases and ducts, using the natural convection currents of hot air. 'Foul' air was pulled mechanically out of the hospital building and removed up the boiler chimney."²⁹¹ Renovations to keep this building up-to-date were made in 1929 and again in 1938.²⁹² In 1992 Laning Hall was razed.²⁹³

3. Outbuildings:

Various outbuildings, primarily service buildings, were erected on the site over the years. Some of the first outbuildings included a milk house, an ice house, and a stable, all constructed in 1834 with materials salvaged from an old barn, perhaps originally belonging to the Pemberton estate.²⁹⁴ In 1887 pavilions or summer houses were designed to enhance the beneficiaries' enjoyment of the landscape.²⁹⁵ In 1897 a shed for the hose cart and garbage was constructed, as was a soap house and a new carpenter shop, while the former carpenter shop was converted into a paint shop.²⁹⁶ And so it continued through the years, until by 1975 there were nearly forty-three structures on the site, mostly storage and service facilities.²⁹⁷ A list of structures published in the *U. S. Naval Home Reuse Study* (1980) includes:

North Gate House – 1844 (South Gate House – similar); Vehicle Storage/
Boiler House – ca. 1890; Stable – 1851; Transformer Vault, Grounds
Equipment, P.W. Storage; Pot Storage; Greenhouse; Greenhouses; West
Gate House – 1845; Storage (Repair Shop); Summer House Pavilion; Biddle

²⁸⁸Hord, np.

²⁸⁹Roberts et al., 14.

²⁹⁰Bassett, *Historic American Buildings Survey, United States Naval Asylum, Laning Hall*, 2.

²⁹¹Roberts et al., 15.

²⁹²*Ibid.*, 1.

²⁹³Inga Saffron, "Naval Home is Lost Only if We Let it Be," *Philadelphia Inquirer* 7 Feb. 2003: E1, E7.

²⁹⁴William Strickland, Architect. Letter to Commodore James Barron, Commanding Officer, Philadelphia. 12 May 1834. Record Group 45, Box No. 551. NARA.

²⁹⁵Hooker, 244.

²⁹⁶*Ibid.*, 252.

²⁹⁷Jeremy Alvarez, "The Naval Home Site Summary Fact Sheet." Memo to John C. Mitkus, Executive Director of the City Planning Commission (13 Nov. 1975), Philadelphia Historical Commission, Philadelphia, Pennsylvania.

Hall Annex – ca. 1890; Governor’s Residence Garage – 1923; Storage and Pump House – 1918; Garage – 1919; Laundry – 1918; Storage Shed – 1917; Housing Shop and Storage Building – 1937-38; Electric Meter House – 1940; Paint Locker – 1941; Incinerator – 1925; Lumber Storage and Carpenter’s Storage – 1950; Water Tank – 1925; Cold Frames – 1937-39; Tunnel Air Ventilator – 1932; Swimming Pool – 1964; Garbage House – 1964; Fence – 1844 (facing Grays Ferry Avenue).²⁹⁸

An even more detailed inventory of the outbuildings is represented by the legend of a 1932 map in the Philadelphia Historical Commission files, which reads:

Administration (includes sick bay, chaplain, fiscal, supply and assembly areas); Subsistence Area; Bachelor Civilian Quarters; Electrical Maintenance/Sail Lockers; Storage; Administration; Rental Housing; Bachelor Civilian Quarters; Shop/Canteen; Theater; Governor’s Quarters; Executive & Medical Officer’s Quarters; Gate House; Gate House; Vehicle Storage; Stable/Green House Storage; Rental Housing; Transformer Vault; PW Storage; PW Storage; Flower Pot Storage; Greenhouse; Greenhouse; Greenhouse; Gate House; PW Storage; Summer; Pavilion; Storage –Commissary; Civilian Barracks with Mess; Subsistence Area; Summer Pavilion; Garage Storage; Pump House; Garage; Garage; Laundry; Storage; Garage; Public Works Maintenance Shop; Vehicle Storage; Rental Housing; Electric Meter House; Paint Locker; Incinerator; Lumber Storage; Carpenter’s Storage; Water Tank; Machine and Pipe Shop; Cold Frame; Cold Fame; Steam Meter House; Pedestrian Tunnel; Flag Pole; Tennis Courts; Flag Pole; Outdoor Swimming Pool; Garage House.²⁹⁹

Nonetheless, identifying several key periods of construction activity on the site is perhaps the most useful way of analyzing the construction of the outbuildings and consequently the overall development of the Naval Asylum complex. Such periods are:

1826–1833

Biddle Hall

1844–1851

Governor’s Residence; Married Officer’s Housing (originally Surgeon General’s Residence); North Gate House; South Gate House; Stable; Pot Storage; West Gate House

1866–1867

Laning Hall

ca. 1878

Greenhouse; Repair Shop; Summer House Pavilion

²⁹⁸Robert et al..

²⁹⁹“U. S. Naval Home Site Plan,” map, 1932, Philadelphia Historical Commission, Philadelphia, Pennsylvania.

ca. 1890

Boiler House; Biddle Hall Annex; Summer House Pavilion

1918–1925

Storage; Storage; Storage; Greenhouse; Greenhouse; Governor's Residence Garage; Garage;
Garage; Married Officer's Housing Garage; Storage Shed; Pump House; Laundry;
Incinerator; Water Tower; Tennis Court

1930–1940

Housing; Shop; Storage; Machine and Pipe Shop; Tunnel; Flagpole

1940–1950

Electric Meter House; Paint Locker; Cold Frames

1950–1960

Lumber Storage; Carpenter's Storage; Steam Meter House; Garbage House

1960–1974

Swimming Pool³⁰⁰

Since acquiring the property, Toll Brothers has cleared it of all the aforementioned structures save Biddle Hall, the Governor's and Surgeon General's Residences, the gatehouses, and the two summer pavilions.

³⁰⁰Roberts et al., 2-4.

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PART IV: PROJECT INFORMATION

The project was co-sponsored by the Historic American Buildings Survey (HABS) of the National Park Service and the Society of Architectural Historians, as the Sally Kress Tompkins Fellowship. The 2003 documentation of the U. S. Naval Asylum was undertaken by the Historic American Buildings Survey, E. Blaine Cliver, Chief of HABS/HAER/HALS; under the direction of Paul D. Dolinsky, Chief of HABS. The project leaders were HABS chief historian Catherine C. Lavoie and HABS historian James A. Jacobs. The project was completed during the summer of 2003 in Philadelphia, Pennsylvania by Sally Kress Tompkins Fellow Margaret Tulloch (University of Virginia).

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